^{48}Ca(^{238}U,Xγ) 2007Re19

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Wang Jimin and Huang Xiaolong	NDS 144, 1 (2017)	1-Mar-2016

2007Re19: E=1.31 GeV beam energy, near the Coulomb barrier, provided by CSSI cyclotron at GANIL facility. Enriched target. Residues detected with VAMOS spectrometer at an angle of 35° to the beam axis. Focal plane detection provided by a secondary electron detector, a segmented ionization chamber and a 21-element Si wall. Measured Eγ, Iγ, $\gamma\gamma$ coin using EXOGAM array of 11 segmented clover Ge detectors. Comparisons with shell-model calculations.

^{51}Ca Levels

E(level)‡	J$^\pi$†
0.0	(3/2$^-$)
1721.0 *17*	(1/2$^-$)
2379.1 *13*	(5/2$^-$)
2937 *5*	(3/2$^-$)
3437 *6*	(7/2$^-$)
3479 *4*	(5/2$^-$)
3845.4 *21*	(7/2$^+$)
4322 *4*	(9/2$^-$)

† As proposed in 2007Re19 based on decay pattern and shell-model calculations.
‡ From a least-squares fit to Eγ's.

γ(^{51}Ca)

E$_\gamma$†	I$_\gamma$†	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
843.4 *27*	0.22 *7*	4322	(9/2$^-$)	3479	(5/2$^-$)
1466.3 *16*	36 *6*	3845.4	(7/2$^+$)	2379.1	(5/2$^-$)
1721.0 *17*	19 *4*	1721.0	(1/2$^-$)	0.0	(3/2$^-$)
1943 *6*	15 *7*	4322	(9/2$^-$)	2379.1	(5/2$^-$)
2379.0 *13*	100 *9*	2379.1	(5/2$^-$)	0.0	(3/2$^-$)
2937 *5*	16 *6*	2937	(3/2$^-$)	0.0	(3/2$^-$)
3437 *6*	17 *6*	3437	(7/2$^-$)	0.0	(3/2$^-$)
3479 *4*	22 *6*	3479	(5/2$^-$)	0.0	(3/2$^-$)

† From e-mail reply received from one of the authors of 2007Re19 (S. Bhattacharya) on Dec 18, 2007.

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Level Scheme

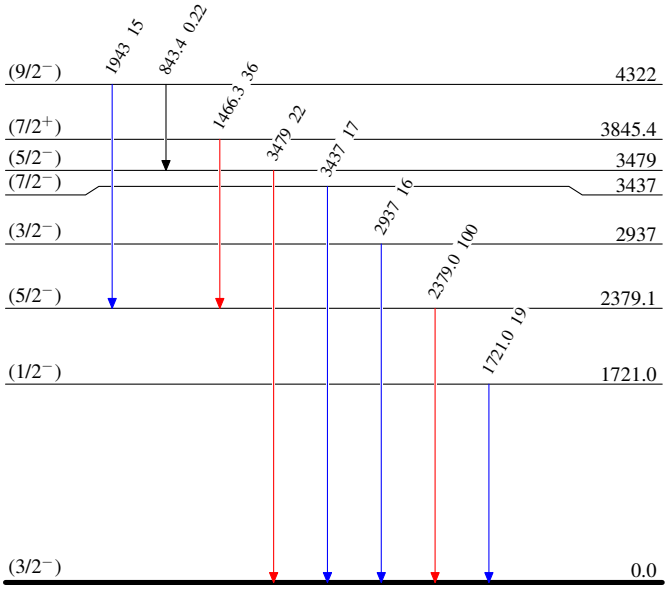
Intensities: Relative I_γ

Legend

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

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

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



$^{51}_{20}Ca_{31}$