

$^{54}\text{Cr}(\text{n},\gamma)$ E=thermal 1972Wh05

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 109, 787 (2008)	30-Apr-2007

Enriched target (94.1%); Ge(Li), measured E_γ , I_γ .

Other: 1971Bo68.

 ^{55}Cr Levels

E(level)	J^π [†]	E(level)	J^π [†]	E(level)	J^π [†]	E(level)	J^π [†]
0.0	3/2 ⁻	565.90 4	3/2 ⁻	2083.83 13	3/2 ⁻	2894.53 13	1/2 ⁻
241.87 5	1/2 ⁻	880.75? 9	5/2 ⁻	2269.23 18	1/2 ⁺	4044.24 21	1/2 ⁺
517.68 5	5/2 ⁻	1474.19 7	1/2 ⁻	2686.98 14	1/2 ⁻ , 3/2 ⁻	(6246.29 18)	1/2 ⁺ [‡]

[†] From Adopted Levels.

[‡] For s-wave capture.

 $\gamma(^{55}\text{Cr})$

There are 56 γ 's which are unplaced in 1972Wh05. Evaluator has suggested placement for three of these based on energy summations. These placements are given in comments only and have not been adopted.

E_γ	I_γ [†]	$E_i(\text{level})$	J_i^π	E_f	J_f^π
^x 104.75 18	0.09 1				
^x 211.66 12	0.07 1				
241.85 6	22.1 22	241.87	1/2 ⁻	0.0	3/2 ⁻
324.03 5	1.57 16	565.90	3/2 ⁻	241.87	1/2 ⁻
^x 351.65 14	0.12 1				
517.68 ^{&} 5	0.70 7	517.68	5/2 ⁻	0.0	3/2 ⁻
565.89 5	11.8 12	565.90	3/2 ⁻	0.0	3/2 ⁻
^x 575.6 4	0.11 1				
^x 651.05 9	0.09 1				
^x 840.93 7	3.06 31				
^x 846.51 13	0.32 3				
880.74 ^{&} 9	0.65 6	880.75?	5/2 ⁻	0.0	3/2 ⁻
908.27 8	7.9 8	1474.19	1/2 ⁻	565.90	3/2 ⁻
^x 1086.74 21	0.09 1				
^x 1197.23 35	0.59 6				
^x 1209.45 31	0.07 1				
1232.21 11	0.88 9	1474.19	1/2 ⁻	241.87	1/2 ⁻
^x 1283.21 27	0.07 1				
^x 1298.69 15	0.13 1				
^x 1340.22 36	0.09 1				
^x 1343.56 29	0.12 1				
^x 1399.86 24	0.12 1				
^x 1419.55 [‡] 21	0.11 1				
^x 1435.6 6	0.27 3				
1474.28 12	7.0 7	1474.19	1/2 ⁻	0.0	3/2 ⁻
^x 1630.56 27	0.10 1				
^x 1647.03 24	0.13 1				
^x 1660.1 5	0.03 1				
^x 1664.87 24	0.08 1				
^x 1689.14 30	0.12 1				

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$^{54}\text{Cr}(\text{n},\gamma)$ E=thermal 1972Wh05 (continued) $\gamma(^{55}\text{Cr})$ (continued)

E_γ	$I_\gamma^\dagger$	$E_i(\text{level})$	J_i^π	E_f	J_f^π
$^{x}1695.9\ 5$	0.06 1				
$^{x}1703.19\ 23$	0.18 2	2269.23	$1/2^+$	565.90	$3/2^-$
$^{x}1803.7\ 6$	0.26 3				
$^{x}1816.40\ 27$	0.15 2				
$^{x}1842.05\ 21$	0.21 2	2083.83	$3/2^-$	241.87	$1/2^-$
$^{x}1873.3\ 4$	0.18 2				
$^{x}1908.3\ 3$	0.12 1				
$^{x}2078.29\ 18$	0.41 4				
$^{x}2083.70\ 17$	0.36 4	2083.83	$3/2^-$	0.0	$3/2^-$
$^{x}2120.97\ 19$	0.31 3	2686.98	$1/2^-, 3/2^-$	565.90	$3/2^-$
$^{x}2143.61\ 16$	0.39 4				
$^{x}2202.00\ 14$	0.69 7	(6246.29)	$1/2^+$	4044.24	$1/2^+$
$^{x}2269.4\ 3$	0.18 2	2269.23	$1/2^+$	0.0	$3/2^-$
$^{x}2328.66\ 16$	0.52 5	2894.53	$1/2^-$	565.90	$3/2^-$
$^{x}2379.48\ 15$	1.59 16				
$^{x}2408.6\ 4$	0.08 1				
$^{x}2444.9\ 3$	0.31 3	2686.98	$1/2^-, 3/2^-$	241.87	$1/2^-$
$^{x}2454.86\ 24$	0.33 3				
$^{x}2457.8\ 3$	0.59 6				
$^{x}2463.9\ 3$	0.10 1				
$^{x}2576.5\ 7$	0.10 1				
$^{x}2652.4\ 3$	0.83 8	2894.53	$1/2^-$	241.87	$1/2^-$
$^{x}2687.0\ 3$	0.90 9	2686.98	$1/2^-, 3/2^-$	0.0	$3/2^-$
$^{x}2697.4\ 3$	0.28 3				
$^{x}2718.0\ 6$	0.08 1				
$^{x}2782.0\ 8$	0.07 1				
$^{x}2894.3\ 3$	1.45 14	2894.53	$1/2^-$	0.0	$3/2^-$
$^{x}2912.3\ 9$	0.07 1				
$^{x}2930.6\ 3$	0.63 6				
$^{x}3019.0\ 9$	0.08 1				
$^{x}3221.1\ 4$	1.86 19				
$^{x}3267.1\ 12$	0.04 1				
$^{x}3351.5\ 7$	2.72 27	(6246.29)	$1/2^+$	2894.53	$1/2^-$
$^{x}3478.1\ 7$	0.09 1	4044.24	$1/2^+$	565.90	$3/2^-$
$^{x}3506.0\ 8$	0.05 1				
$^{x}3524.5^\# 16$	0.05 1				
$^{x}3548.5\ 5$	0.90 9				
$^{x}3558.6\ 5$	1.43 14	(6246.29)	$1/2^+$	2686.98	$1/2^-, 3/2^-$
$^{x}3659.5\ 9$	0.06 1				
$^{x}3791.2\ 11$	0.05 1				
$^{x}3801.6^\circ 6$	0.12 1				
$^{x}3977.0\ 6$	0.35 4	(6246.29)	$1/2^+$	2269.23	$1/2^+$
$^{x}4044.1\ 5$	0.31 3	4044.24	$1/2^+$	0.0	$3/2^-$
$^{x}4162.2\ 5$	0.46 5	(6246.29)	$1/2^+$	2083.83	$3/2^-$
$^{x}4219.5\ 8$	0.08 1				
$^{x}4466.3\ 7$	0.15 2				
$^{x}4771.8\ 4$	13.1 13	(6246.29)	$1/2^+$	1474.19	$1/2^-$
$^{x}4868.8\ 10$	0.21 2				
$^{x}5047.3\ 7$	0.11 1				
$^{x}5421.3\ 5$	2.11 21				
$^{x}5586.1\ 13$	0.07 1				
$^{x}5594.1\ 13$	0.06 1				
$^{x}5680.4\ 5$	2.14 21	(6246.29)	$1/2^+$	565.90	$3/2^-$
$^{x}6004.4\ 6$	13.4 13	(6246.29)	$1/2^+$	241.87	$1/2^-$
$^{x}6246.4\ 6$	55.5 56	(6246.29)	$1/2^+$	0.0	$3/2^-$

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 $^{54}\text{Cr}(\text{n},\gamma)$ E=thermal **1972Wh05** (continued)

 $\gamma(^{55}\text{Cr})$ (continued)

[†] Values are normalized to give a g.s. total feeding of 100. $\Delta I\gamma \approx 10\%$.

[‡] Possibly from 2895 to 1474 level (evaluator).

Possibly from 4044 to 518 level (evaluator).

@ Possibly from 4044 to 242 level (evaluator).

& Placement of transition in the level scheme is uncertain.

^x γ ray not placed in level scheme.

