

$^{140}\text{Ce}(p,2n\gamma)$:delayed [1988Ar07](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	P. K. Joshi, B. Singh, S. Singh, A. K. Jain		NDS 138, 1 (2016)	15-Oct-2016

E=25 MeV.

Decay scheme observed for 114γ delayed gate. All data are from (p,2n γ), except as noted. ^{139}Pr Levels

E(level)	$J^{\pi\dagger}$	E(level)	$J^{\pi\dagger}$	E(level)	$J^{\pi\dagger}$	E(level)	$J^{\pi\dagger}$
0.0	$5/2^+$	851.90 10	$11/2^+$	1624.50 22	$(11/2,9/2)^-$	2187.50 16	$(19/2,15/2)^-$
113.94 5	$7/2^+$	1024.04 21	$9/2^+$	1722.18 11	$15/2^-$	2278.10 16	$(19/2,15/2)^-$
589.44 12	$(3/2,5/2)^+$	1369.70 13	$9/2^-$	1866.6 4	$(9/2,13/2)^+$		
822.00 8	$11/2^-$	1523.10 11	$13/2^-$	1941.50 12	$17/2^-$		

 \dagger As proposed in [1988Ar07](#) based on $\gamma(\theta)$ data for prompt γ rays. See Adopted Levels for recommended assignments. $\gamma(^{139}\text{Pr})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
113.94 5		113.94	$7/2^+$	0.0	$5/2^+$
199.1 1	8 1	1722.18	$15/2^-$	1523.10	$13/2^-$
219.32 5	58 5	1941.50	$17/2^-$	1722.18	$15/2^-$
246.0 1	14 1	2187.50	$(19/2,15/2)^-$	1941.50	$17/2^-$
336.6 1	19 2	2278.10	$(19/2,15/2)^-$	1941.50	$17/2^-$
475.5 1	12 1	589.44	$(3/2,5/2)^+$	113.94	$7/2^+$
547.7 1	25 2	1369.70	$9/2^-$	822.00	$11/2^-$
701.12 10	44 4	1523.10	$13/2^-$	822.00	$11/2^-$
708.06 6	100 8	822.00	$11/2^-$	113.94	$7/2^+$
737.96 8	69 6	851.90	$11/2^+$	113.94	$7/2^+$
802.5 2	12 1	1624.50	$(11/2,9/2)^-$	822.00	$11/2^-$
900.16 8	53 5	1722.18	$15/2^-$	822.00	$11/2^-$
910.1 2	36 2	1024.04	$9/2^+$	113.94	$7/2^+$
1014.7 3	24 2	1866.6	$(9/2,13/2)^+$	851.90	$11/2^+$

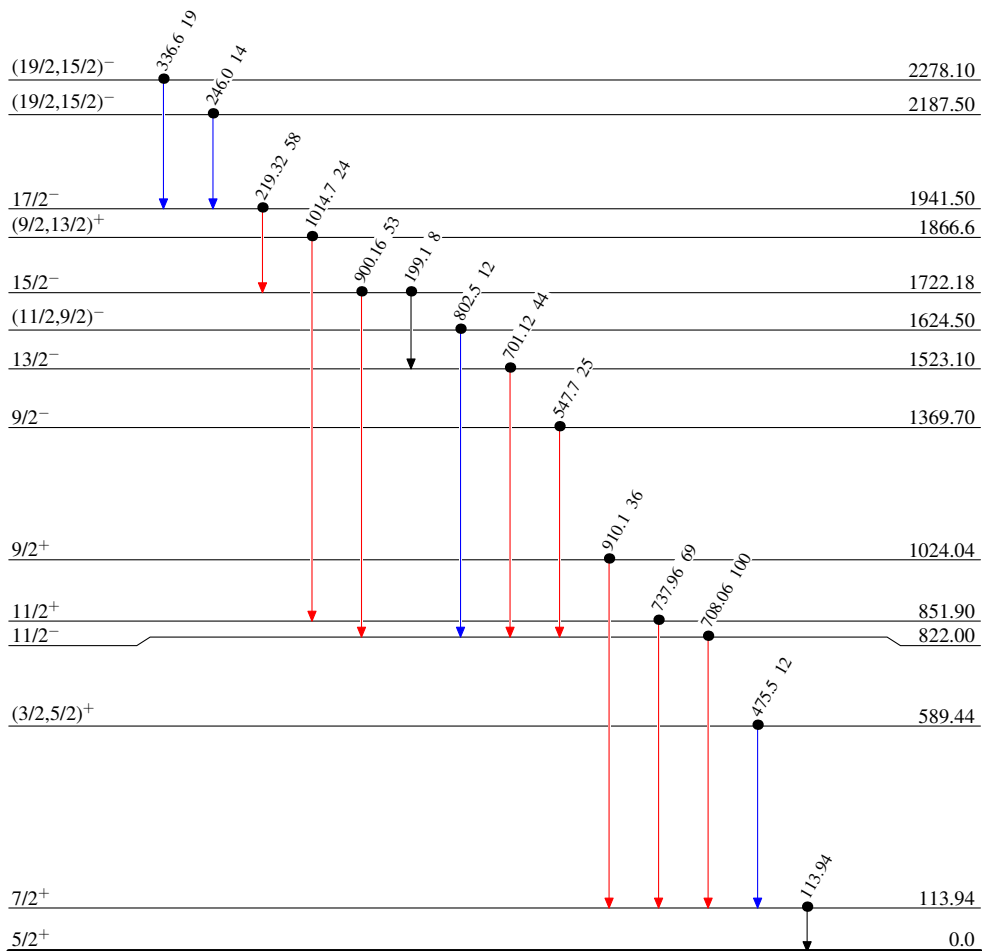
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Legend

Level Scheme

Intensities: Relative I_γ

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

 $^{139}\text{Pr}_{80}$