

(HI,xn γ) 1991Ca30

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

1991Ca30: $^{40}\text{Ca}(^{14}\text{N},3\text{p}\gamma)$, E=40 MeV; $^{27}\text{Al}(^{27}\text{Al},2\text{pn}\gamma)$, E=90 MeV; measured $E\gamma$, $\gamma\gamma$ -coin, $\gamma(\theta)$, DSA.

1981Fr08: $^{46}\text{Ti}(^{13}\text{C},2\alpha\gamma)$, E=49,55 MeV, measured $E\gamma$, $I\gamma(\theta)$, $\gamma\gamma$ coin.

1979Da07: $^{48}\text{Ti}(^{16}\text{O},^{12}\text{Cn}\gamma)$, E=120 MeV, measured $E\gamma$, $I\gamma$, $^{12}\text{C}\gamma$ coin, compared to data from $^{48}\text{Ti}(\alpha,n\gamma)$.

Others: 1974Ko10, 1988Ca24, 1988CaZT.

 ^{51}Cr Levels

All data from 1991Ca30.

E(level) [†]	J ^π [‡]	T _{1/2} [@]	E(level) [†]	J ^π [‡]	T _{1/2} [@]	E(level) [†]	J ^π [‡]	T _{1/2} [@]
0.0 ^a	7/2 ⁻ [#]		3181 ^a	17/2 ⁻	0.42 ^{&} ps	6162 ^b	(21/2,23/2 ⁻)	
1165 ^a	9/2 ⁻	0.077 ps	3817 ^a	19/2 ⁻	0.28 ^{&} ps	6894 ^b	(23/2,25/2 ⁻)	>2 ^{&} ps
1481 ^a	11/2 ⁻	0.56 ps	5563			8485 ^b	(25/2,27/2 ⁻)	
2256 ^a	15/2 ⁻	46 ps	5711 ^a	23/2 ⁻	1.18 ^{&} ps			

[†] From level scheme and $E\gamma$'s.

[‡] From $\gamma(\theta)$ and band configuration (1991Ca30). 1979Da07 results support adopted values.

[#] From Adopted Levels.

[@] From DSA measurements. Uncertainties are 30-50%, arising mainly from unknown side feeding.

[&] Effective T_{1/2}.

^a Band(A): f7/2 band. Member: 7/2⁻ to 23/2⁻.

^b Band(B): possible band.

 $\gamma(^{51}\text{Cr})$

All data from 1991Ca30.

$E\gamma$	E _i (level)	J _i ^π	E _f	J _f ^π	Mult.	Comments
316 [‡]	1481	11/2 ⁻	1165	9/2 ⁻	D+Q	$\gamma(\theta)$: A ₂ =-0.50 10; A ₄ =+0.13 9.
636 [†]	3817	19/2 ⁻	3181	17/2 ⁻	D+Q	$\gamma(\theta)$: A ₂ =-0.47 12; A ₄ =+0.21 13.
775 [‡]	2256	15/2 ⁻	1481	11/2 ⁻	Q	$\gamma(\theta)$: A ₂ =+0.20 10; A ₄ =+0.05 11.
925 [‡]	3181	17/2 ⁻	2256	15/2 ⁻	D+Q	$\gamma(\theta)$: A ₂ =-0.35 12; A ₄ =+0.20 13.
1165 [‡]	1165	9/2 ⁻	0.0	7/2 ⁻	D+Q	$\gamma(\theta)$: A ₂ =-0.70 11; A ₄ =+0.21 9.
1331	6894	(23/2,25/2 ⁻)	5563			
1480	1481	11/2 ⁻	0.0	7/2 ⁻	E2	$\gamma(\theta)$: A ₂ =+0.24 9; A ₄ =+0.09 11. Mult.: Q from $\gamma(\theta)$; not M2 from RUL.
1746	5563		3817	19/2 ⁻		
1894	5711	23/2 ⁻	3817	19/2 ⁻	Q	$\gamma(\theta)$: A ₂ =+0.28 22; A ₄ =-0.34 28.
2345	6162	(21/2,23/2 ⁻)	3817	19/2 ⁻		
2774	8485	(25/2,27/2 ⁻)	5711	23/2 ⁻		

[†] Observed also by 1981Fr08.

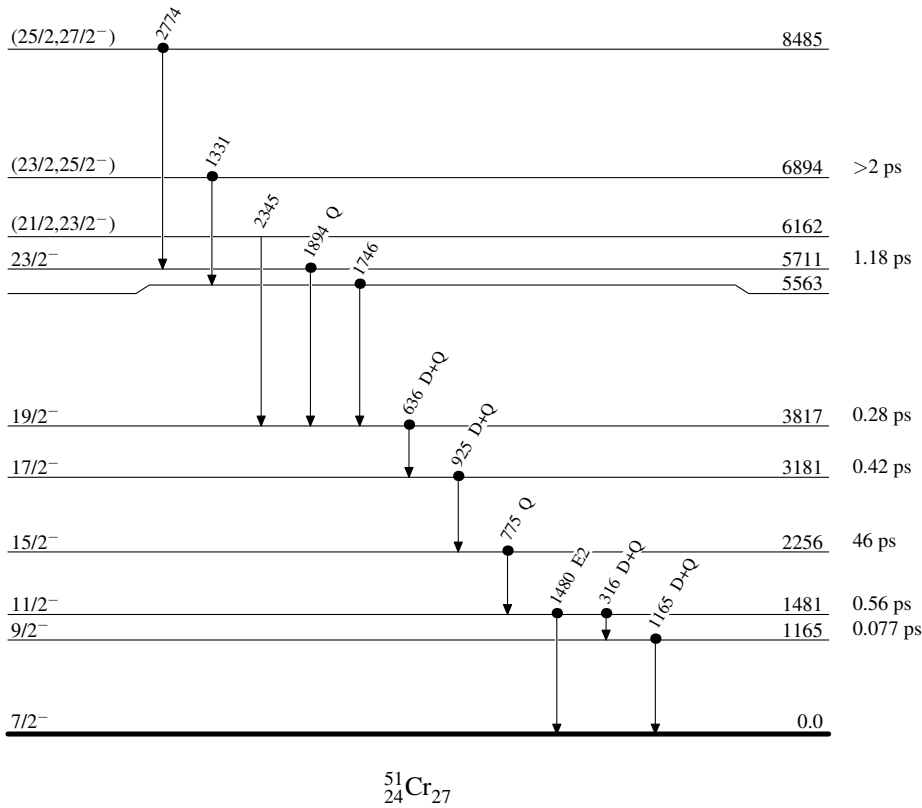
[‡] Observed also by 1979Da07.

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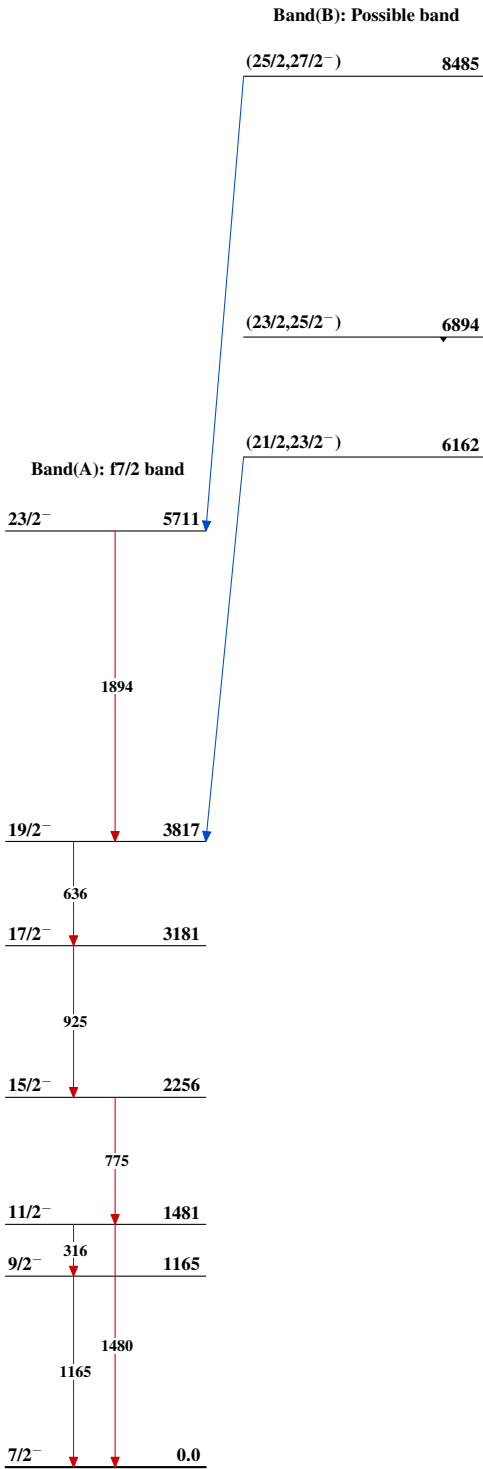
Legend

Level Scheme

● Coincidence



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$^{51}_{24}\text{Cr}_{27}$