

Coulomb excitation 1977Pa22

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Huo Junde	NDS 110,2689 (2009)	31-Mar-2007

1977Pa22: E(p)=2.5-3.5 MeV, measured: γ , $\gamma(\theta)$ E(α)=4.0-7.0 MeV, measured: γ , $\gamma(\theta)$.
 1967Af03: ^{12}C E=40 MeV, measured: γ .
 1969Ga25: ^{14}N E=31 MeV, measured: γ .
 1966Mc18: ^{16}O E=33 MeV, measured: γ , $\gamma(\theta)$.
 1973Th03: ^{32}S E=55, 59 MeV, reorientation effect.
 Others: 1960Le07, 1976ErZW.

 ^{53}Cr Levels

E(level)	J^π [†]	$T_{1/2}$ [‡]	Comments
0.0	$3/2^-$		Q=+0.04 7 (1973Th03)
564.0 10	$1/2^-$	0.49 ps 7	B(E2)=0.0100 8 (1977Pa22). Others: 0.011 2 (1969Ga25), 0.0094 (1967Af03), 0.0115 10 (1966Mc18), 0.0118 8 (1961Mc18). $T_{1/2}$: from 1973ErZZ, DSAM. Other: 50 ps 4 from B(E2).
1005.7 7	$5/2^-$	7.1 ps 6	B(E2)=0.0116 9 (1977Pa22). Others: 0.020 6 (1969Ga25), 0.0102 (1967Af03), 0.0072 12 (1966Mc18), 0.011 (1973ErZZ).
1286.2 7	$7/2^-$	1.18 ps 7	B(E2)=0.0253 16 (1977Pa22). Others: 0.024 6 (1969Ga25), 0.0216 (1967Af03), 0.030 12 (1966Mc18), 0.027 (1973ErZZ). $T_{1/2}$: other: 0.90 ps 20 (1973ErZZ).
1539.0 7	$7/2^-$	0.80 ps 9	B(E2)=0.0018 2 (1977Pa22). Other: 0.0022 9 (1969Ga25). This value corresponds to B(E2)= 6.9×10^{-5} .
1973.1 8	$5/2^-$	0.39 ps 5	B(E2)=0.0063 8 (1977Pa22).
2233.0 13			
2322.1 10	$3/2^-$	8 fs 5	B(E2)=0.0122 14 (1977Pa22).

[†] Adopted values.

[‡] From B(E2) values, except as noted.

 $\gamma(^{53}\text{Cr})$

E_γ	I_γ [‡]	$E_i(\text{level})$	J_i^π	E_f	J_f^π	Mult. [†]	δ [†]	Comments
253	32 1	1539.0	$7/2^-$	1286.2	$7/2^-$	M1(+E2)	-0.55 5	Additional information 5.
281	7 1	1286.2	$7/2^-$	1005.7	$5/2^-$	M1(+E2)	-0.072 6	Additional information 3.
533	57 1	1539.0	$7/2^-$	1005.7	$5/2^-$	M1(+E2)	-0.322 24	Additional information 6.
564	100	564.0	$1/2^-$	0.0	$3/2^-$	D		Additional information 1.
687	13 1	1973.1	$5/2^-$	1286.2	$7/2^-$	M1+E2	+0.77 5	Additional information 8.
694	≈ 100	2233.0		1539.0	$7/2^-$			
1006	100	1005.7	$5/2^-$	0.0	$3/2^-$	E2+M1	+0.80 6	Additional information 2.
1286	93 1	1286.2	$7/2^-$	0.0	$3/2^-$	E2		Additional information 4.
1539	11 1	1539.0	$7/2^-$	0.0	$3/2^-$	E2		Additional information 7.
1973	87 1	1973.1	$5/2^-$	0.0	$3/2^-$	M1+E2	+0.89 8	Additional information 9.
2322	100	2322.1	$3/2^-$	0.0	$3/2^-$			Additional information 10.

[†] From $\gamma(\theta)$ (1977Pa22).

[‡] % photon branching from each level.

Coulomb excitation 1977Pa22**Level Scheme**Intensities: Relative I_γ

Legend

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

