Coulomb excitation 1987Ar17,1967Ki02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 145, 25 (2017)	1-Jul-2017

1987Ar17: E(p)=3.0 MeV; measured: γ, deduced B(E2).
1967Ki02: E(α)=4 MeV to 7 MeV; measured: γ, $\gamma\gamma$, deduced B(E2).
1974Er04: E(^{12}C)=35 MeV; E(^{14}N)=38 MeV; measured: γ, Doppler broadening; deduced $T_{1/2}$.

^{99}Ru Levels

B(E2): From 1987Ar17.

E(level)	J^{π} †	$T_{1/2}$ ‡	Comments
0	$5/2^+$		
89.42 *10*	$3/2^+$	24.7 ns *27*	B(E2)↑=0.075 *8* Other: B(E2)=0.085 *10* (1967Ki02). B(E2)↑: If α=1.50.
322.1 *4*	$3/2^+$		B(E2)↑≤0.002
340.53 *16*	$7/2^+$		B(E2)↑=0.011 *2* B(E2)<0.001 in 1967Ki02.
442.02 *23*	$1/2^+$	11 ps *3*	B(E2)↑=0.012 *2* (1967Ki02)
575.48 *18*	$5/2^+$	1.1 ps *3*	B(E2)↑=0.031 *3* $T_{1/2}$: From B(E2) in 1987Ar17. Other:B(E2)=0.024 *3* (1967Ki02). $T_{1/2}$: 1.1 ps *3* from Doppler broadening (1974Er04).
617.37 *15*	$7/2^+$	0.7 ps *3*	B(E2)↑=0.082 *9* Other: B(E2)=0.083 *8* (1967Ki02). $T_{1/2}$: 2.5 ps *6* from Doppler broadening (1974Er04).
719.19 *19*	$9/2^+$	2.25 ps *23*	B(E2)↑=0.207 *21* B(E2)=0.128 *15* in 1967Ki02 gives $T_{1/2}$=3.7 ps *4*. $T_{1/2}$: 2.1 ps *5* from Doppler broadening (1974Er04).

† Adopted values.
‡ From B(E2).

$\gamma(^{99}Ru)$

E_γ †	I_γ	E_i(level)	J_i^π	E_f	J_f^π	E_γ †	I_γ	E_i(level)	J_i^π	E_f	J_f^π
89.4 *1*	1150	89.42	$3/2^+$	0	$5/2^+$	378.8 *8*	6	719.19	$9/2^+$	340.53	$7/2^+$
101.4 *8*	4	719.19	$9/2^+$	617.37	$7/2^+$	486.0 *2*	55	575.48	$5/2^+$	89.42	$3/2^+$
276.8 *2*	21	617.37	$7/2^+$	340.53	$7/2^+$	527.9 *4*	36	617.37	$7/2^+$	89.42	$3/2^+$
322.1 *4*	18	322.1	$3/2^+$	0	$5/2^+$	575.6 *3*	33	575.48	$5/2^+$	0	$5/2^+$
340.5 *2*	33	340.53	$7/2^+$	0	$5/2^+$	617.4 *2*	195	617.37	$7/2^+$	0	$5/2^+$
352.6 *2*	85	442.02	$1/2^+$	89.42	$3/2^+$	719.2 *2*	210	719.19	$9/2^+$	0	$5/2^+$

† From 1967Ki02.

Coulomb excitation 1987Ar17,1967Ki02

Level Scheme

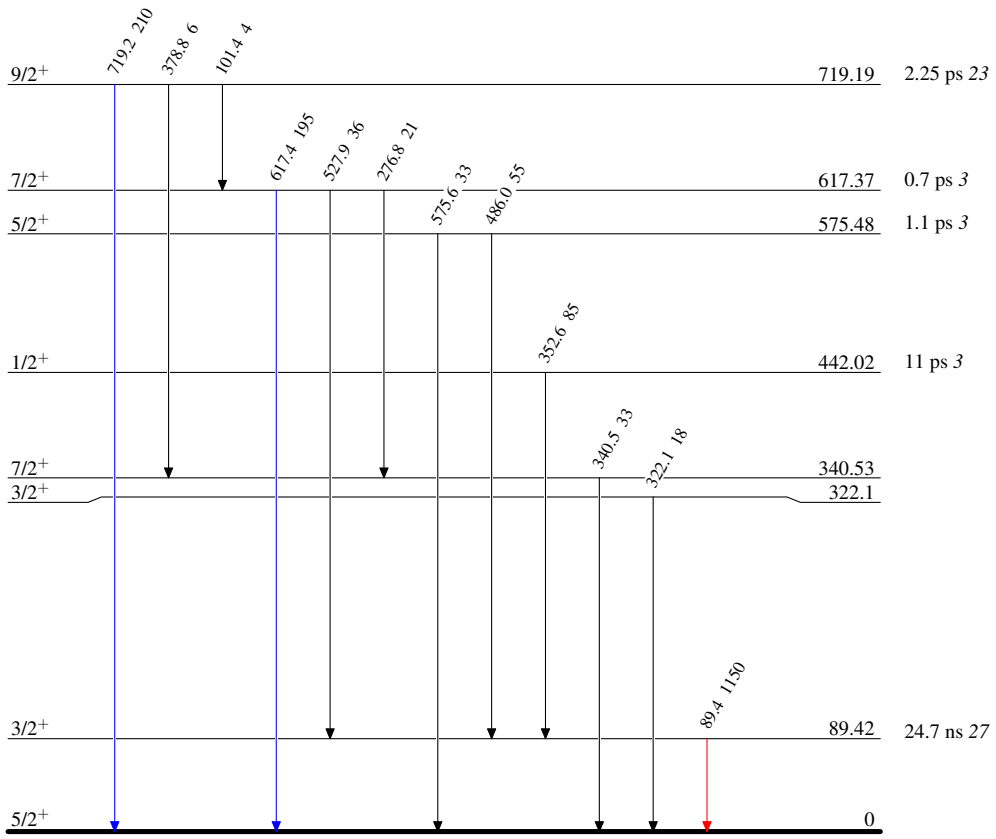
Intensities: Relative I_γ

Legend

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

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

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



$^{99}_{44}Ru_{55}$