^{79}Br(γ,γ') 1970We01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh	NDS 135, 193 (2016)	31-May-2016

1970We01 (also 1967Sc17): E=0.2-0.9 MeV. Gammas obtained from gaseous ^{79}Kr sources. Measurement of absolute cross sections for resonance scattering used to deduce J^π and $T_{1/2}$ values.

1995Kh02: E≤662 keV (from ^{137}Cs source). Cross section measured for the production of the isomer through the population of 384, $5/2^+$ state and subsequent deexcitation by a weak 174γ to the 207 isomer. Deduced lifetime of 384 state.

1993Ca24: E=2-7 MeV. Based on cross section data for population of 207 isomer through intermediate states 1993Ca24 suggest population of 761 and 1800 *100* states with $J^\pi=7/2^-$ which decay to the isomer through E1 transitions.

1966La06: $\gamma(\theta)$ for three γ rays.

Additional information 1.

^{79}Br Levels

E(level)	J^π[†]	$T_{1/2}$[‡]	S[#]	Comments
0.0	$3/2^-$			
207	$9/2^+$	4.85 s *4*		%IT=100 $T_{1/2}$: from Adopted Levels.
261.4	$3/2^-$	>125 ps	<20	
306.6	$1/2^-,3/2^-$	8.3 ps *17*	130 *25*	$T_{1/2}$: for J=1/2. $T_{1/2}$=16.6 ps *34* for J=3/2. J^π: 1970We01 suggest that 1/2 is favored from 306$\gamma(\theta)$ in Coul. ex.
383.6	$5/2^+$			E(level): level populated by 1995Kh02.
397.6	$1/2^-,3/2^-$	13 ps *3*	13 *3*	$T_{1/2}$: for J=1/2. $T_{1/2}$=26 ps *6* for J=3/2.
522.8	$5/2^-$	1.3 ps *4*	5.1×10^2 *12*	
606.2	$3/2^-$	2.0 ps *3*	58 *4*	
761[@]	$7/2^-$[@]			
832.0	$1/2^-,3/2^-$	0.20 ps *4*	90 *10*	$T_{1/2}$: for J=3/2. $T_{1/2}$=0.10 ps *2* for J=1/2.
1.8×10^3[@] *1*	$(7/2^-)$[@]			

[†] See Adopted Levels.
[‡] From (γ,γ') (1970We01).
[#] Scattering cross section (mb).
[@] From 1993Ca24.

$\gamma(^{79}$Br)

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Mult.	Comments
176.6	383.6	$5/2^+$	207	$9/2^+$		From cross section for the 207 isomer, 1995Kh02 deduce partial $T_{1/2}$=6 ns *2*.
207	207	$9/2^+$	0.0	$3/2^-$	E3	Mult.: from Adopted Gammas.
261.4	261.4	$3/2^-$	0.0	$3/2^-$		
306.6	306.6	$1/2^-,3/2^-$	0.0	$3/2^-$		
383.6	383.6	$5/2^+$	0.0	$3/2^-$		
397.6	397.6	$1/2^-,3/2^-$	0.0	$3/2^-$		A_2=0.00 *13* (1966La06)
522.8	522.8	$5/2^-$	0.0	$3/2^-$		Strong A_4 anisotropy (1966La06).
554[†]	761	$7/2^-$	207	$9/2^+$		
606.2	606.2	$3/2^-$	0.0	$3/2^-$		A_2=+0.075 *40* (1966La06)
832.0	832.0	$1/2^-,3/2^-$	0.0	$3/2^-$		A_2=0.00 *10* (1966La06)
1.6×10^3[†]	1.8×10^3	$(7/2^-)$	207	$9/2^+$		

[†] Implied from the population of 207 isomer from 761 and 1800 levels proposed by 1993Ca24.

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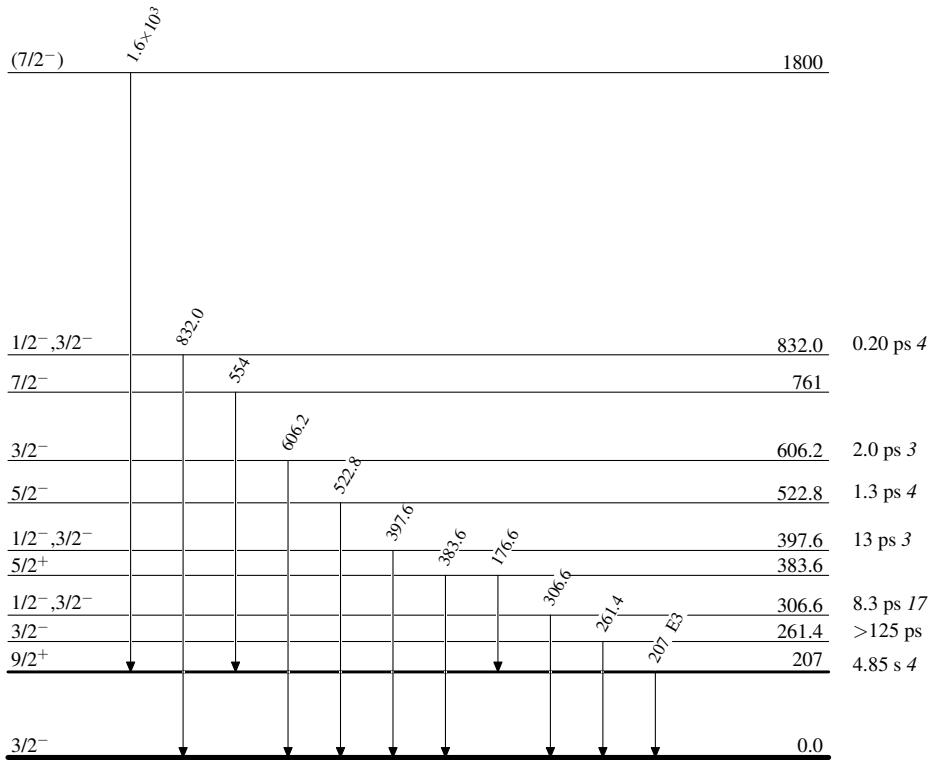
Level Scheme



$^{79}_{35}Br_{44}$