Coulomb excitation 1989Go19

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli	NDS 109, 2657 (2008)	1-Jun-2008

Additional information 1.

Projectile: ^{4}He, E=17 MeV. Target: mass-separated ^{229}Th. Measured scattered alpha particles at θ=150°. Split-pole magnetic spectrometer. Determined B(E2) and B(E3) reduced transition probabilities.

^{229}Th Levels

E(level)	J^{π} †	$T_{1/2}$	Comments
0.0‡	$5/2^+$	7.88×10^3 y *12*	
42‡	$7/2^+$		B(E2)↑=3.691 *89*.
97‡	$9/2^+$		B(E2)↑=1.281 *48*.
163‡	$11/2^+$		
241‡	$13/2^+$		
287@ *5*	$(3/2^+)$		B(E2)↑=0.023 *5*.
313@ *5*	$(5/2^+)$		B(E2)↑=0.008 *4*.
480 *5*			
512# *5*	$5/2^-$		B(E3)↑=0.076 *30*.
562# *5*	$7/2^-$		B(E3)↑=0.195 *39*.
611# *5*	$9/2^-$		B(E3)↑=0.114 *33*.

† From Adopted Levels.

‡ Band(A): 5/2[633].

Band(B): $K^{\pi}=5/2^-$ band 5/2[633] coupled to $K^{\pi}=0^-$ octupole vibrational band.

@ Band(C): 1/2[631]?

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Band(B): $K^{\pi}=5/2^{-}$ band 5/2[633] coupled to $K^{\pi}=0^{-}$ octupole vibrational band

$9/2^{-}$ 611

$7/2^{-}$ 562

$5/2^{-}$ 512

Band(C): 1/2[631]?

$(5/2^{+})$ 313

$(3/2^{+})$ 287

Band(A): 5/2[633]

$13/2^{+}$ 241

$11/2^{+}$ 163

$9/2^{+}$ 97

$7/2^{+}$ 42

$5/2^{+}$ 0.0