Coulomb excitation   1999Ib01

	History			
Type	Author	Citation	Literature Cutoff Date	
Full Evaluation	Balraj Singh and Jun Chen	ENSDF	15-Dec-2017	

Beam=^{35}Al. Target=^{197}Au.

1999Ib01: Nuclei of interest produced by fragmentation of a 70 MeV/nucleon ^{48}Ca beam from the K1200 cyclotron at the National Superconducting Cyclotron Laboratory (NSCL) at Michigan State University on a 285 mg/cm^2 ^{9}Be target, and then the secondary mixed-particle beam incident on a 532 mg/cm^2 ^{197}Au target. A 300 μm Si PIN detector at the focal plane of the A1200 for identifying the secondary beam particles and a plastic phoswich detector for detecting scattered particles in coincidence with γ-detection in an array of 38 cylindrical NaI(Tl) detectors. Measured Eγ, Iγ. Deduced level, transition strength.

2000PrZX: Nuclei of interest produced by fragmentation of a 80 MeV/nucleon ^{48}Ca beam from the K1200 cyclotron at the National Superconducting Cyclotron Laboratory (NSCL) at Michigan State University on ^{9}Be target, and then the secondary beam of 55.83 MeV/nucleon ^{35}Al incident on a ^{197}Au target. Measured recoils, Eγ, Iγ using silicon detector and NaI(Tl). Deduced level, transition strengths.

^{35}Al Levels

E(level)	J$^\pi$	Comments
0	(5/2$^+$)	J$^\pi$: from Adopted Levels.
1020 *8*		E(level): from Eγ.
		B(E2)=0.0142 *52* (1999Ib01). 2000PrZX give B(E1)≤0.00020 *9*, B(E2)≤0.0125 *56*. 2000PrZX also give B(M1) and B(M2).
		σ=30 mb *14* (2000PrZX).

γ(^{35}Al)

E$_i$(level)	E$_\gamma$	I$_\gamma$	E$_f$	J$^\pi_f$	Comments
1020	1020 *8*	100	0	(5/2$^+$)	E$_\gamma$: weighted average of 1006 *19* in 1999Ib01 and 1023 *8* in 2000PrZX.

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Level Scheme

Intensities: % photon branching from each level

1020 100

1020

$(5/2^+)$

0

$^{35}_{13}\text{Al}_{22}$