^{44}Ca(e,e′) 1989It02,1971He08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, Balraj Singh and John A. Cameron	NDS 112, 2357 (2011)	31-Jul-2011

1989It02: E=62.5-250 MeV electron beam produced from the linear accelerators both at the Laboratory of Nuclear Science, Tohoku University and at the Accelerator Laboratory, University of Saskatchewan. Target of 44.3 mg/cm^2 98.6% enriched ^{44}Ca metallic foil. Scattered electrons detected by a hodoscope-type array of solid state detector or plastic scintillators. Measured σ(E(e′),θ). Deduced levels, B(El).

1971He08: E=198, 250, 300 MeV electron sources produced from the Stanford Mark 3 electron accelerator. Enriched target of ^{44}Ca. Scattered electrons detected by a ladder detector. Measured σ(E(e′),θ). Deduced levels, B(El).

Others:

1968Fr11: E=250, 500 MeV. σ(E(e′),θ).

1970Ra31: E=250 MeV. Deduced nuclear charge distributions.

1978Gr02: E=31-67 MeV. Measured σ(E(e′),θ). Matrix element for 0^+ level.

1980St17: E=39 MeV. Measured σ(E(e′),θ). No 1^+ states seen.

1981It02: E=124-250 MeV. Measured σ(E(e′),θ). Deduced GDR.

1984Ra04: E=50 MeV. Measured σ(E(e′),θ).

B(EL)′s quoted from 1989It02 are based on TASSIE model.

^{44}Ca Levels

E(level)[†]	J$^\pi$[#]	L[‡]	Comments
0	0^+		Strongly populated level.
1160	2^+	2	B(E2)↑=0.0550 *20* (1989It02); B(E2)↑=0.048 *3* (1971He08)
1880	0^+		Level from 1978Gr02. E0 matrix element=5.45 fm^2 *41*.
2280	4^+	4	E(level): from 1971He08. G=2.66 W.u. 15.
2660	2^+		B(E2)↑=0.0079 *7* (1989It02)
3259?	2^+	2	B(E2)↑=0.0054 *10* E(level): from 1971He08. No such level is found in any other studies, thus is not given in Adopted Levels.
3310	3^-	3	B(E3)↑=0.0095 *9* (1989It02); B(E3)↑=0.00559 *23* (1971He08) The most intense peak in (e,e′) E=250 MeV spectrum (1989It02).
3910	5^-	5	B(E5)↑=0.000096 *8* (1989It02); B(E5)↑=0.000053 *5* (1971He08)
4350	3^-		B(E3)=0.0018 *2* (1989It02) for 4350+4390.
4390	3^-		B(E3): see comment for 4350 level.
4560	5^-		B(E5)↑=0.000036 *5* (1989It02)
4900	3^-		
11850 *10*	2^-		E(level): from 1984Ra04. B(M2)=30 μ_n^2 fm^2 7 (1984Ra04).

[†] From 1989It02, unless otherwise stated. M2 excitation at 11850 is from 1984Ra04. Some additional weak M2 excitations are also found by 1984Ra04 near this energy, but no energies are given.

[‡] From 1971He08.

[#] From Adopted Levels.