

$^{110}\text{Cd}(e,e')$ 1991We15,1990We08,1977Gi13

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	G. Gürdal and F. G. Kondev		NDS 113, 1315 (2012)	1-Aug-2011

1991We15,1990We08: The experiments were performed at NIKHEF. The electrons were accelerated to 70-440 MeV with the medium-energy accelerator (MEA) facility. ≈ 15 mg/cm² thick, 96% enriched, self-supporting metallic foil of ^{110}Cd target was used. The scattered electrons were analyzed with the QDD spectrometer, at angles from 34° to 87° to cover an effective momentum transfer range of 0.3-2.55 fm⁻¹. Optimal resolution was 11 keV for the low-energy data. Measured: Form factors. Deduced: ^{110}Cd levels, B(E2), B(E4).

1977Gi13: The Glasgow 130 MeV electron linear accelerator was used to accelerate electrons at 68 and 112 MeV. 30 mg/cm² thick, %91 enriched, self-supporting metallic foil of ^{110}Cd target was used. The differential cross sections were measured in the angular range between $\theta=64^\circ-148^\circ$ yielding momentum transfer in the range of 0.37 to 1.09 fm⁻¹. The overall experimental resolution was 0.15% FWHM of the incident electron energy (i.e 150 keV at 100 MeV). Measured: $\sigma(E,\theta)$. Deduced: B(E2), Q.

 ^{110}Cd Levels

B(E2), B(E4): from **1991We15**, unless otherwise stated.

E(level) [†]	J ^π [†]	Comments
0.0	0 ⁺	
657.7645 20	2 ⁺	B(E2) \uparrow : 0.45 4 (1991We15), 0.454 43 (1977Gi13). Q: -0.40 4. Q: Deduced from fits to the inelastic electron scattering cross sections within the framework of the anharmonic vibrational model in 1977Gi13 .
1475.800 3	2 ⁺	B(E2) \uparrow =0.014 3
1542.434 13	4 ⁺	B(E4) \uparrow =0.5 $\times 10^{-3}$ 5
1783.484 18	2 ⁺	B(E2) \uparrow =0.005 3 (1990We08)
1809.48 9	4 ⁺	B(E4) \uparrow =2.8 $\times 10^{-3}$ 11
2220.078 3	4 ⁺	B(E4) \uparrow =6.5 $\times 10^{-3}$ 21
2250.551 11	4 ⁺	B(E4) \uparrow =6.2 $\times 10^{-3}$ 16
2561.316 10	4 ⁺	B(E4) \uparrow =3.4 $\times 10^{-3}$ 15

[†] From Adopted Levels.