

$^{60}\text{Ni}(e,e')$ 1969To08,1981Li19

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	E. Browne, J. K. Tuli		NDS 114, 1849 (2013)	31-Dec-2012

E=183 and 250 MeV, $\sigma(\theta)$, $\theta=35^\circ-95^\circ$, magnetic spectrograph, FWHM $\approx 0.1\%$, enriched target (1969To08).

E= 205 MeV, and others, spectrum at $\theta(\text{lab})=140^\circ$ and 180° to cover the momentum transfer region 1.5 to 2.7 fm $^{-1}$, enriched target, identified 8 $^-$ states (1981Li19).

For giant resonance region, see 1980Pi02, 1977Kh04, 1976Li23, 1974Gu29, 1974Gu16, 1973Gu22.

For theoretical analysis see 1985Mo07 (for data in 1969To08) and 1988Cl03 (for data in 1981Li19).

Others: 1978Sh05, 1974Si01, 1974Ye01, 1972Li26, 1969Af01, 1967Du07, 1961Cr01.

 ^{60}Ni Levels

All data for E(level)<7500 are from 1969To08.

E(level)	J^π [†]	Comments
0		
1.33×10^3	10 2 $^+$	B(E2) $\uparrow=0.077$ 8 B(E2) \uparrow : 1974Si01 have reanalyzed the data from 1969To08 and 1967Du07 and obtained B(E2)= 0.087 7.
2.16×10^3	10 2 $^+$	B(E2) $\uparrow=0.0015$ 4
2.50×10^3	10 4 $^+$	B(E4) $\uparrow=1.5 \times 10^{-3}$ 3
3.13×10^3	10 4 $^+$	B(E4) $\uparrow=3.1 \times 10^{-4}$ 7
3.67×10^3	10 4 $^+$	B(E4) $\uparrow=5.7 \times 10^{-4}$ 12
4.04×10^3	10 3 $^-$	B(E3) $\uparrow=0.016$ 3
4.85×10^3	10 (2 $^+$)	B(E2) $\uparrow=5.0 \times 10^{-3}$ 10
4.85×10^3	10 (4 $^+$)	B(E4) $\uparrow=4.4 \times 10^{-4}$ 9
5.05×10^3	10 4 $^+$	B(E4) $\uparrow=1.2 \times 10^{-3}$ 3
5.05×10^3	10 6 $^+$	B(E6) $\uparrow=1.5 \times 10^{-4}$ 5
6.20×10^3	10 3 $^-$	B(E3) $\uparrow=2.2 \times 10^{-3}$ 4
6.85×10^3	10 (2 $^+$)	B(E2) $\uparrow=3.9 \times 10^{-3}$ 6
6.85×10^3	10 (5 $^-$)	B(E5) $\uparrow=3.5 \times 10^{-4}$ 9
7.05×10^3	10 3 $^-$	B(E3) $\uparrow=2.2 \times 10^{-3}$ 4
7522	10 8 $^-$ [‡]	T=2.
8433	10 8 $^-$ [‡]	T=2.
8959	10 8 $^-$ [‡]	T=2.
9172	10 8 $^-$ [‡]	T=2.
12333	10 8 $^-$ [‡]	T=(3).
12505	10 8 $^-$ [‡]	T=(3).
13908	10 8 $^-$ [‡]	T=(3).
14840	10 8 $^-$ [‡]	T=(3).
15499	10 8 $^-$ [‡]	T=(3).

[†] From comparison of the form factor with Born approximation (1969To08), except as noted otherwise.

[‡] Based on a least-squares fit assuming an M8 (g9/2,f7/2,-1) transition and with use of harmonic oscillator radial wave functions with oscillator constant B= 1.98 fm (1981Li19), 1981Li19 give B(M8) $\uparrow(8^- \text{ levels}) > 7500$ but their quoted units are not correct.