^{64}Zn(e,e′) 1980Wo02,1977Ne05,1976NeZS

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 178, 41 (2021).	12-Nov-2021

1980Wo02: E=100, 150, 275 MeV. Measured $\sigma(\theta)$, deduced $\Delta<r^2>$.
1977Ne05 (also 1976Ne06,1972Ne01): E=100,150,275 MeV, $\sigma(\theta)$, DWBA. Data reanalyzed by 1981Ko06 to deduce Q.
1976NeZS (also 1978Ne11): E=150, 225, 280 MeV. Deduced B(EL) values.
Others:
1977Ne14: E=300 MeV. Giant-dipole resonances.
1972Li26 (also 1972Li12): E=225 MeV, $\sigma(\theta)$.
1970Af04 (also 1970Af03): E=150, 225 MeV.
Theoretical analysis: 1982KhZY, 1977Af03, 1973Bo35.
Except as noted, values of B(EL) are from a model-independent analysis by 1977Ne05. Those from 1976NeZS are based on a phenomenological model; the units in 1976NeZS appear to be (e^2fm^{2L}).

^{64}Zn Levels

E(level)†	Jπ‡	L	Comments
0	0^+		$\Delta<r^2>(^{66}Zn-^{64}Zn)$=0.0225 fm *30* (1980Wo02), 0.025 fm *13* (1972Li26), 0.039 fm *7* (1972Ne01). $\Delta<r^2>(^{64}Zn-^{62}Ni)$=0.0893 fm *12* (1980Wo02). $\Delta<r^2>(^{64}Zn-^{60}Ni)$=0.132 fm *20* (1972Li26).
992	2^+	2	B(E2)↑=0.162 *9* (1977Ne05); 0.155 *9* (1976Ne06); 0.126 *9* (1976NeZS); 0.160 *7*, 0.172 *14* (1970Af04). βR=1.10 fm *3* (1976Ne06); β_2=0.21 (1972Li12); 0.210 *10* (1970Af04). Q=−0.143 *21* (data of 1976Ne06,1977Ne05 analyzed by 1981Ko06). Others: −0.124 *12* (1976Ne06); −0.135 *16* (1972Li12).
1800	2^+	2	B(E2)↑=0.00170 *12* (1977Ne05)
2305	4^+	4	B(E4)↑=0.00034 *10* (1977Ne05)
2980	3^-	3	B(E3)↑=0.040 *7* (1976Ne06); 0.0309 *18* (1976NeZS); 0.0307 *23* (average of 0.0323 *23* and 0.0291 *15* from 1970Af04). βR=1.08 fm *9* (1976Ne06); β_3=0.117 *6* (1970Af04).
4300		2+4	B(E2)↑=0.012 *3* (1976NeZS) B(E4)↑=0.00374 *24* (1976NeZS)
5500		4	B(E4)↑=0.00446 *24* (1976NeZS)
7000		4	B(E4)↑=0.00434 *24* (1976NeZS)

† From 1977Ne05 below 3 MeV, from 1976NeZS above 3 MeV.
‡ From L(e,e′), the assignments are the same in the Adopted Levels.