Measurement of e and m for Electron

First experiment by R. Millikan (1913)
Method used here: balancing weight and electric force on oil drop
Radius of oil drop: $r = 1.64\mu\mathrm{m}$
Mass density of oil: $\rho = 0.851\mathrm{g/cm}^3$
Electric field: $E = 1.92 \times 10^5 \mathrm{N/C}$
Mass of oil drop: $m = \frac{4\pi}{3} r^3 \rho = 1.57 \times 10^{-14}\mathrm{kg}$
Equilibrium of forces: $neE = mg$
Number of excess elementary charges (integer): $n = 5$
Elementary charge: $e = \frac{mg}{nE} \simeq 1.6 \times 10^{-19}\mathrm{C}$
Mass of electron: $m \simeq 9.1 \times 10^{-31}\mathrm{kg}$