

Electric Fields Internet Activity

From the course website, click on **Millikan's Oil Drop Experiment Simulation**. (Lab Section)

Set the electric field to a value and press "Start"

Adjust the electric field until you notice a drop that is not moving. (It may be easier if you uncheck the box "Replace with new drops automatically" and push the "New drops" button when there are no more drops.)

Record the electric field.

Do this for 6 drops.

Note: Be patient, it's not as easy as it looks.

Calculate the charge on the drop: $q = \frac{mg}{1000E}$

Fill in the third column (charge divided by 1.6×10^{-19}). This third column tells us how many electrons are on the oil drop. (Each number should be very close to an integer).

Use the simulation to determine the charge on the electron. (The equation needed is given in the website).

Electric Field E (kV/m)	Charge on Drop Q (C)	Charge $\div 1.6 \times 10^{-19}$

Try some of the other simulations of electric fields listed on the course website.