

### **Laboratory 3**

**<https://ophysics.com/em2.html>**

1. In the given Millikan Oil drop experiment applet,
  - (i) Determine the charge on ten (or more) different oil-drops. Record all your data in a table or spreadsheet.
  - (ii) When you have the table filled in, look at the various values for  $q$ . Is there any pattern to them, or are they seemingly random? Can you draw any conclusions from the  $Q$  measurements?

**<https://phet.colorado.edu/en/simulation/coulombs-law>**

2.
  - (i) Relate the electrostatic force magnitude to the charges and the distance between them.
  - (ii) Use measurements to determine Coulomb's constant.
  - (iii) Determine what makes a force attractive or repulsive.