

Ionization of Gases

Instructions

Materials:

Neon discharge tube
Mercury discharge tube
Transformer
Fluorescent light bulb
Plasma globe

Demo Procedure:

1. Carefully insert the discharge tubes, one at a time, into the transformer box to show the characteristic color light emitted by the Ne and Hg gas.
2. You can also use a plasma globe to ionize the gas in the discharge tube. Turn on the plasma tube and simply hold the discharge tubes close to the plasma globe. You should see the discharge tube glow with characteristic colored lights.
3. Another interesting example is to show how the fluorescent light bulb is similar to a gas discharge tube. When the bulb is held close to the plasma globe the gas inside the light bulb is ionized and glows with a white light.