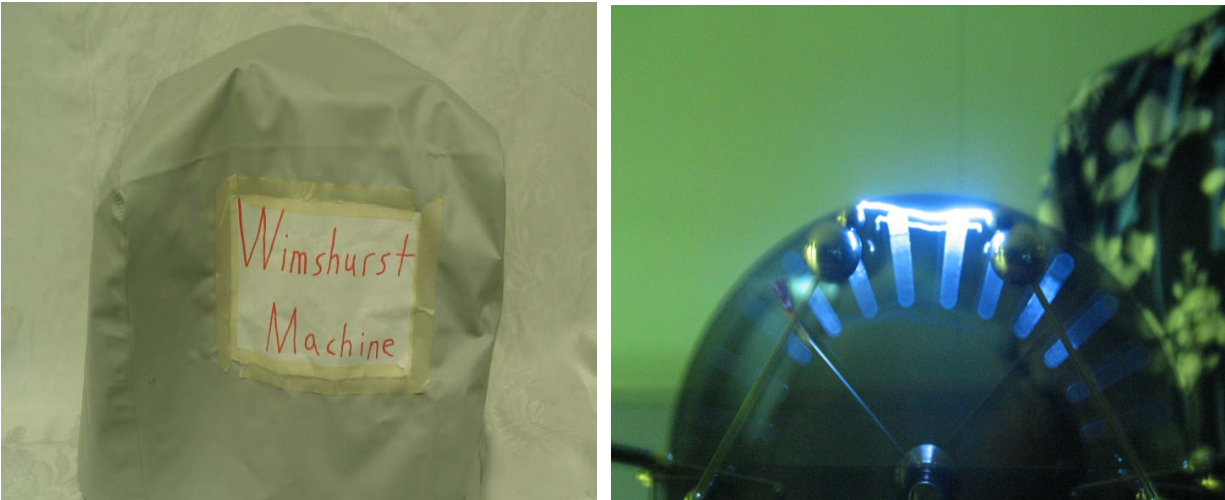


Storing Charge in Leyden Jars (WM)



Purpose: To show dramatically that the charge generated by a Wimshurst machine can be stored in Leyden jars.

Location: room 146; shelf L2

With the Leyden jars disconnected, and the spheres set about 2 inches apart, crank the Wimshurst until a spark discharge occurs. (Turning the lights down can enhance visibility.)

Without changing the distance between spheres, short both terminals to the Leyden jars using the provided handles, so the charge goes to the Leyden jars. Crank the Wimshurst again until a spark discharge occurs. It may take a little longer this time, but when the discharge occurs it will be much brighter and louder, indicating a much greater discharge. Where did the additional charge come from? It was stored in the Leyden jars on the front of the machine. The Leyden jar acts as a “capacitor” (a.k.a. condenser), a device that can store charge.

NOTE: Do not operate the Wimshurst any longer than necessary, as the bearings may seize and prevent cranking.