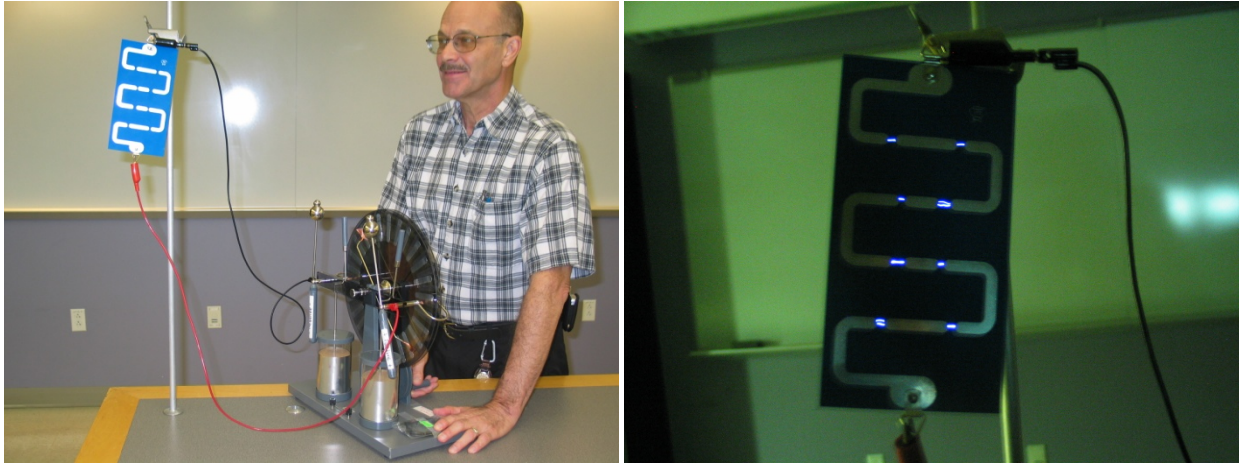


## Lightning Plate (WM)



**Purpose:** To show that some of the characteristics of an electrostatic discharge.

**Location:** room 146; shelf L6 (Wimshurst, L2; rod, vertical bin by wall)

Get a vertical rod from the vertical bins near the door to room 144 and attach the rod clamp with the wooden dowel at a good height for visibility. Hang the lightning plate from the dowel and attach the alligator clips from the Wimshurst + and - terminals to either end. The Leyden jars on the Wimshurst should not be connected. Turn the lights down for best effect. Just a few turns of the crank should generate a potential difference large enough to result in discharges across the gaps (typically at least 25,000 volts!).

Note that the sparks follow the path of least “resistance” between conductors (i.e. shortest distance). Note also that the spark brightness is uniform from one end to the other, regardless of gap width.

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