

## Van de Graaff Generator (VdG): Streamers & Grounding Wand



**Purpose:** To demonstrate various electrostatic phenomena using a Van de Graaff generator.

**Location:** room 146; VdG and wand, shelf L1; streamers on shelf L3

The van de Graaff is designed to generate much more electrostatic charge than the Scotch tape or rod and cloth rubbing used previously. First, connect the discharge wand to the ground on the base of the unit so you can discharge it without getting a nasty shock. A good way to start is by placing the streamers atop the dome and making them stand on end (first photo). Bring the discharge wand close to the dome to show that it will discharge by emitting “lightning strikes” to the wand, resulting in the streamers falling down. Explain that the spark occurs because the “electric field” near the dome is so strong it “ionizes” the air. If you want to have someone’s hair stand on end, use the plastic step stool and have them place their hands on the dome first.