Van de Graaff Generator

The Van de Graaff generator collects electrostatic charge on its dome at potentials on the order of 100 kV. One may observe 3-4" discharge arcs between the charge collecting and grounded spheres. Pie plates placed on the charge collecting sphere will fly off when the generator is turned on. A person charged by the Van de Graaff will experience his hair standing on end. A wig is provided for those with short or no hair.

Procedure for Charging a Person with the Van de Graaff Generator:

Charging a person is best done with two people – a "subject" to be charged and an "operator" to charge and discharge the apparatus. While the Van de Graaff generator is off and discharged, the subject should stand on a wooden step-stool and place a hand on the larger, charge collecting dome. It should be verified that there are no possible discharge paths between the subject and an electrical ground. The subject should be instructed not to remove their hand from the dome once it is turned on. The operator may then turn the generator on so that the class can observe the subject's hair standing on end. To discharge the generator and subject, the operator should first turn off the generator and then discharge the charge-collecting dome using the grounded wand. Only when the generator is discharged should the subject remove his hand from the dome. Alternatively, the subject may discharge himself by using the pointed, ungrounded wand to slowly leak off collected charge.