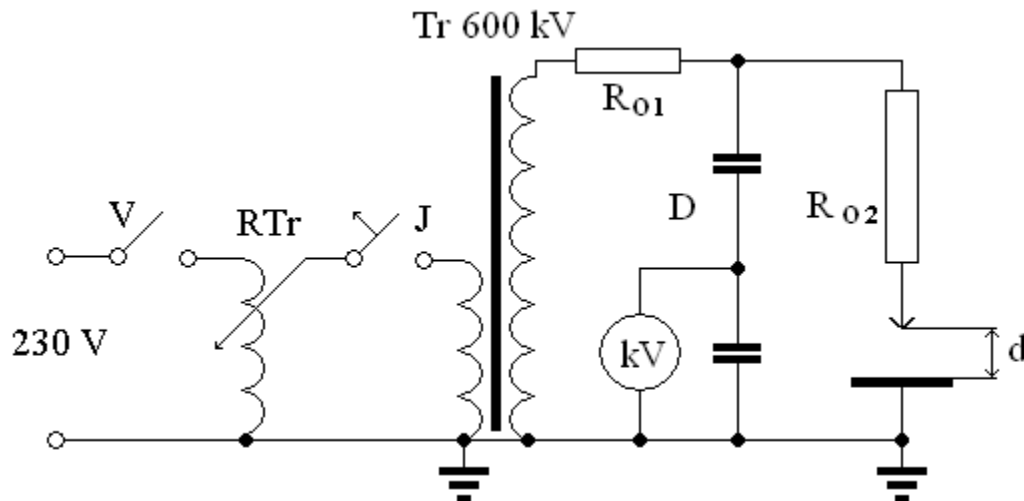


Task 4: Electrode shape influence to the Flashover Voltage in the Air

(Laboratory F1-13, main lab)

Determine the dependency of electrical strength on gap distance for rod-rod, rod-plane, sphere-plane, and sphere-sphere electrode arrangements at ac voltage. Three measurements should be at least performed for each gap distance to respect probability behavior of discharges in the air. All measured dependencies should be plotted together in one graph.

Measurement circuit:



V	- main switch	D	- high voltage divider (capacitive)
RTr	- controlled power transformer	kV	- voltmeter
J	- breaker	Ro2	- limiting resistor
Tr	- testing transformer 600 kV	d	- gap distance
Ro	- limiting resistor		

Electrode arrangements:

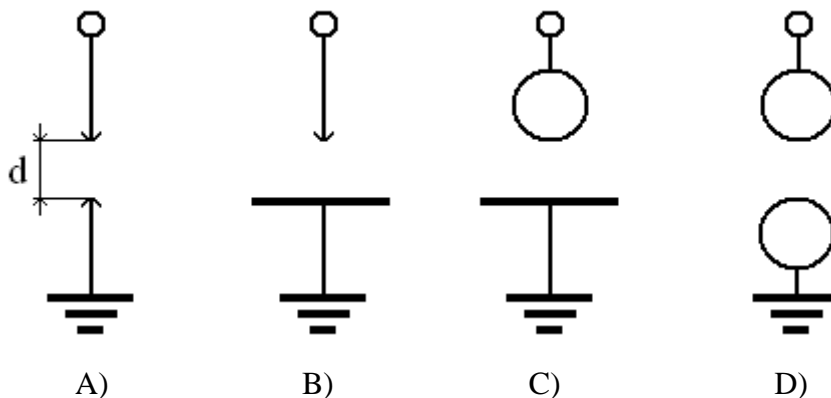


Fig. 1: Electrode arrangements:

A) rod - rod, B) rod - plane, C) sphere - plane, D) sphere - sphere

Table of Measured Values:

Rod-Rod	Gap distances d_i (mm)				
U_1 (kV)					
U_2 (kV)					
U_3 (kV)					
$\emptyset U$ (kV)					

Rod-Plane	Gap distances d_i (mm)				
U_1 (kV)					
U_2 (kV)					
U_3 (kV)					
$\emptyset U$ (kV)					

Sphere-Plane	Gap distances d_i (mm)				
U_1 (kV)					
U_2 (kV)					
U_3 (kV)					
$\emptyset U$ (kV)					

Sphere-Sphere	Gap distances d_i (mm)				
U_1 (kV)					
U_2 (kV)					
U_3 (kV)					
$\emptyset U$ (kV)					

Graphical Evaluation of Results:

