

# HELWAN LAB. PREPARATION

Yasser Assran  
Gabriella Pugliese

# What we have in Helwan

- **HV Power system** → SY 2527 Universal Multichannel Power Supply System with HV modules and High Voltage Power Supply (0-3 KV) (ORTEC 456) for scintillator.
- **LV system** --> SY 2527 Universal Multichannel Power Supply System with LV modules.
- **GAS system** ..> Gas Mixer, Freon bottle and Ar-CO<sub>2</sub> bottle. We need to switch to RPC standard mixture.
- **Electronic for trigger** -->
  - QUAD Discriminator (Model 621AL)
  - CMS RPC Receiver.
  - Discriminator (Model 620AL)
  - Coincidence Unit (Model 465)
  - QUAD SCALER AND PRESET COUNTER TIMER (MOD.N1145)
  - Linear FAN-IN/FAN-OUT (Model 428F)
  - Linear FAN-OUT (Model 128L)
  - Four Scintillators (50x50 Cm)
  - GWINSTEK GDS-2204 Digital storage Oscilloscope (200 MHZ 1G Sa/a).



# What we have in Ain Shams

- PC equipped with the required software.
- VME crate 8 slot (32).
- TDC
- PCI [OpticalLink \(A2818 + AY2705\)](#).
- VME-PCI Bridge (V2718).
- 5 Cable ([WA967XAAAAAA A967 - 32 Channel Cable Adapter \(1x32 to 2x16\) 4 135,00 2 529,20](#) NI8A for V767, V862, V1190, VX1190, V1495 30D 90D).
- All this equipments will trnsport to Helwan By this Sunday.

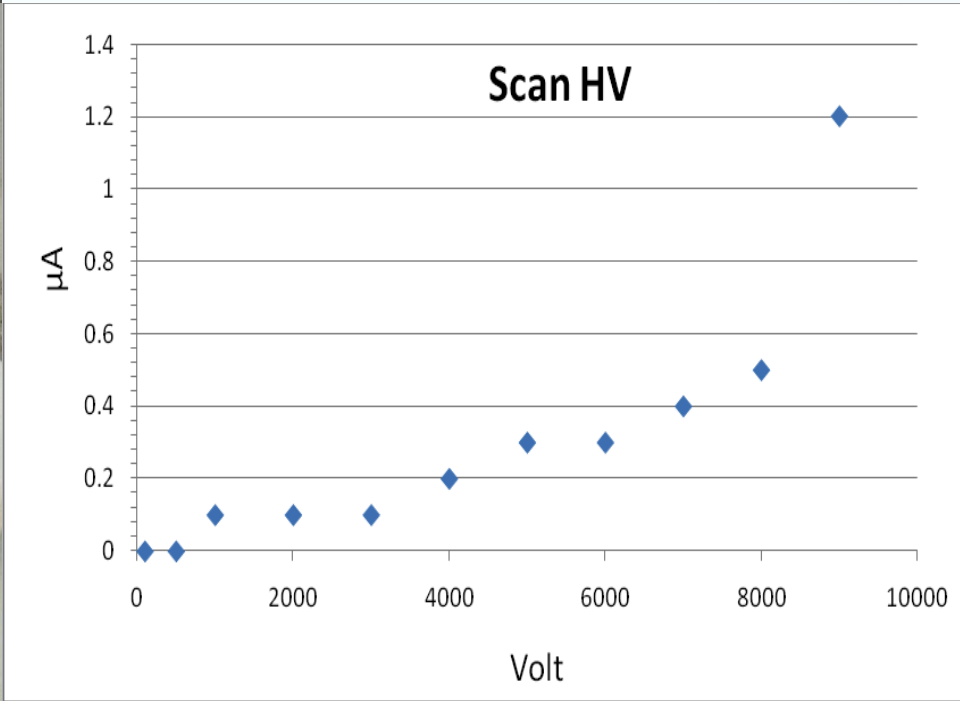
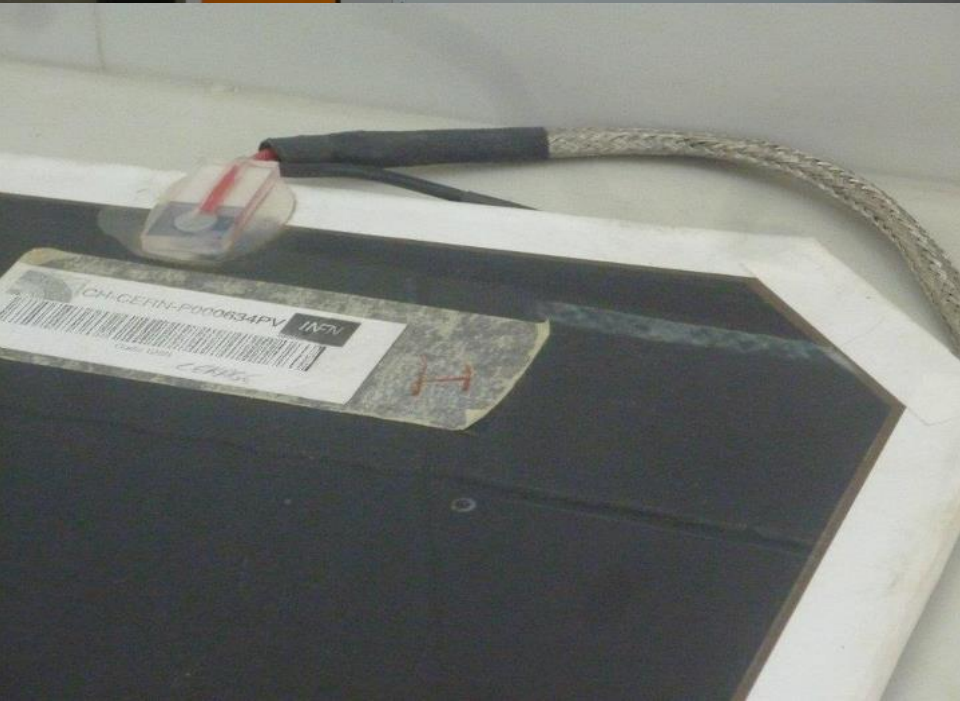
# What we miss

- ECL-NIM-ECL module
- linear Fan-out
- Gas Mixture
- Coincidence unit
- Scalar
- Dual Timer.

# What we did

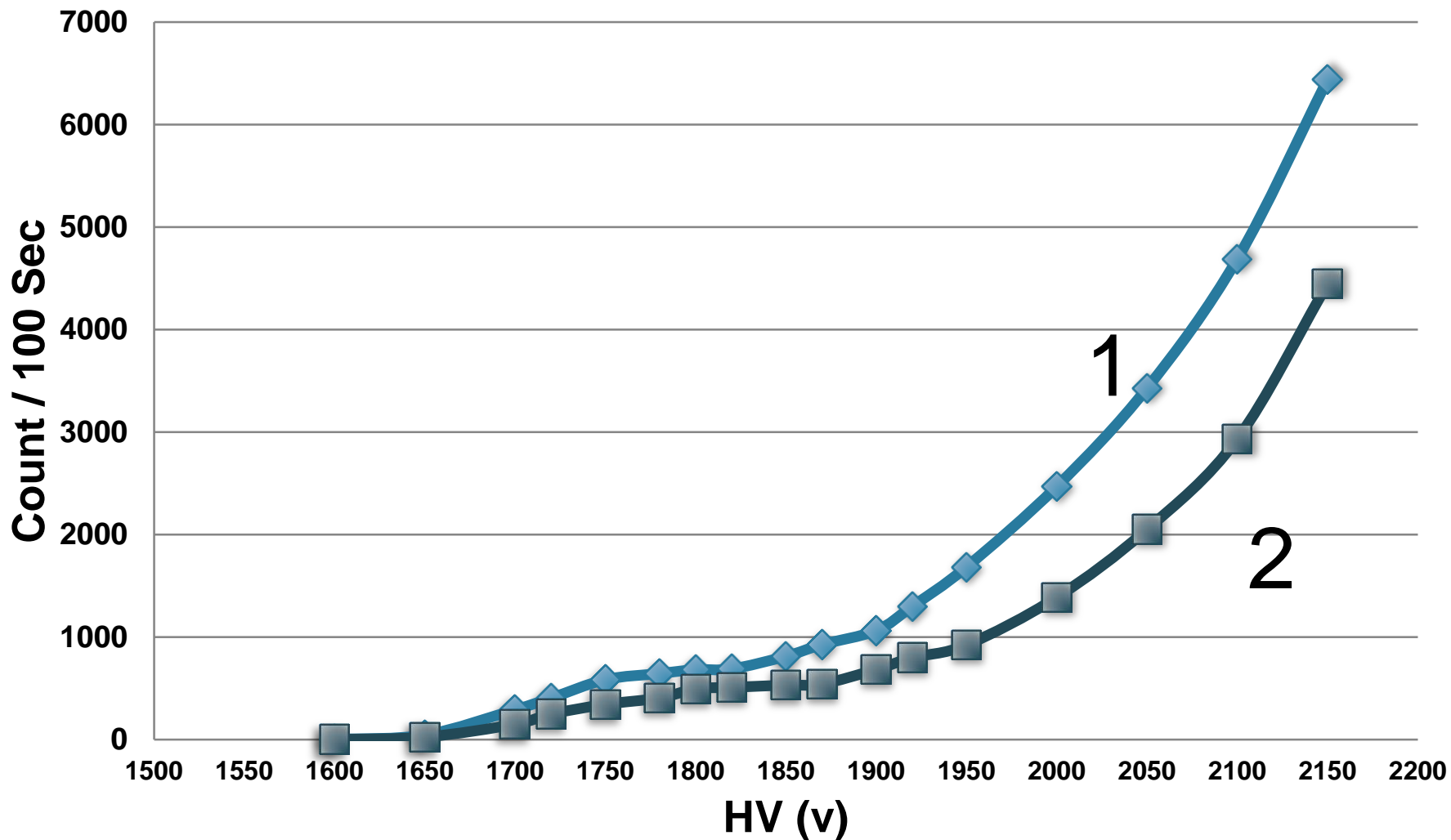
- Gap tests.
  - Gas leak test.
  - Spacer Test.
  - HV Test.





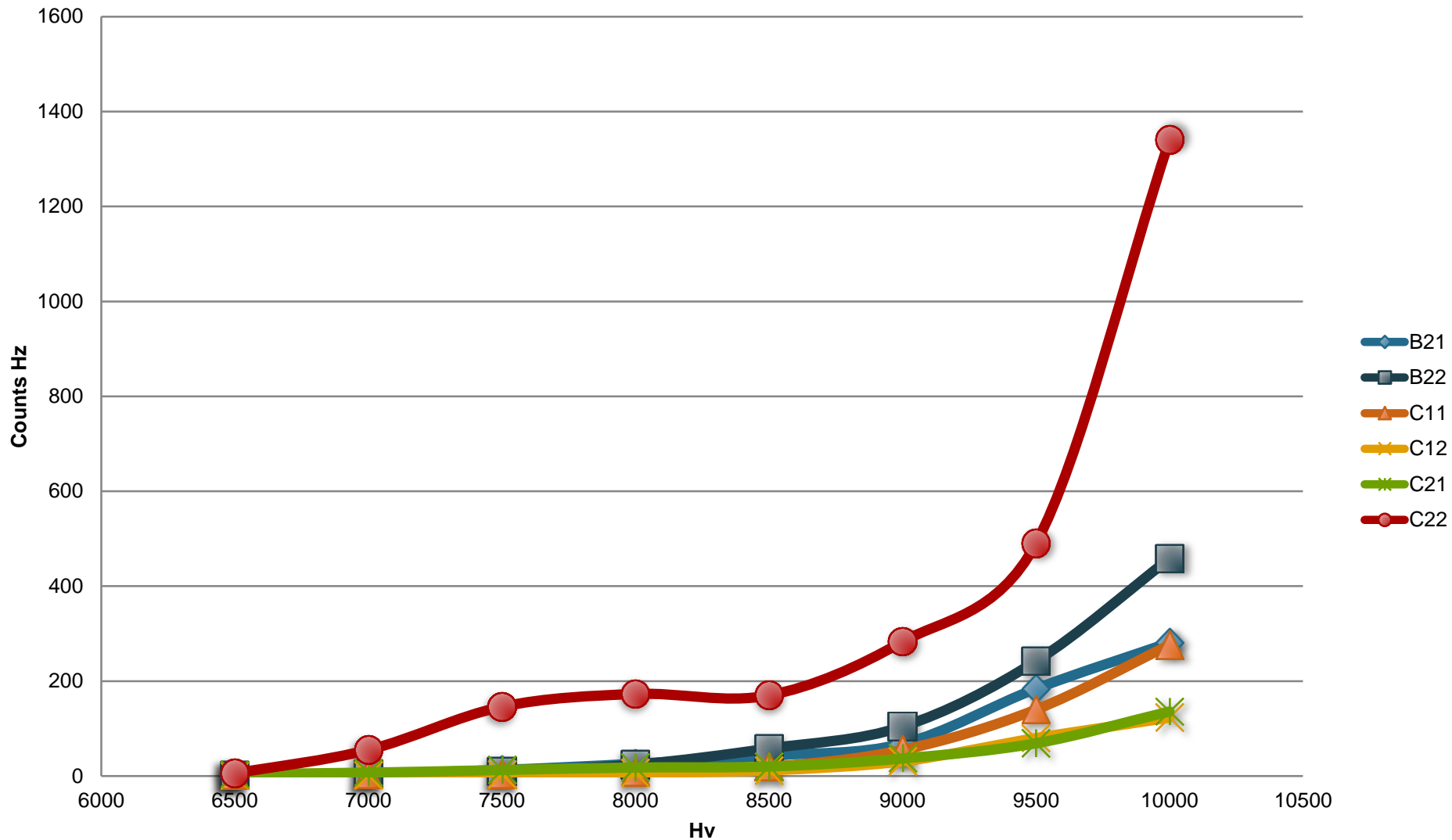
# Results at 904 (scintillators HV scan)

HV Scan

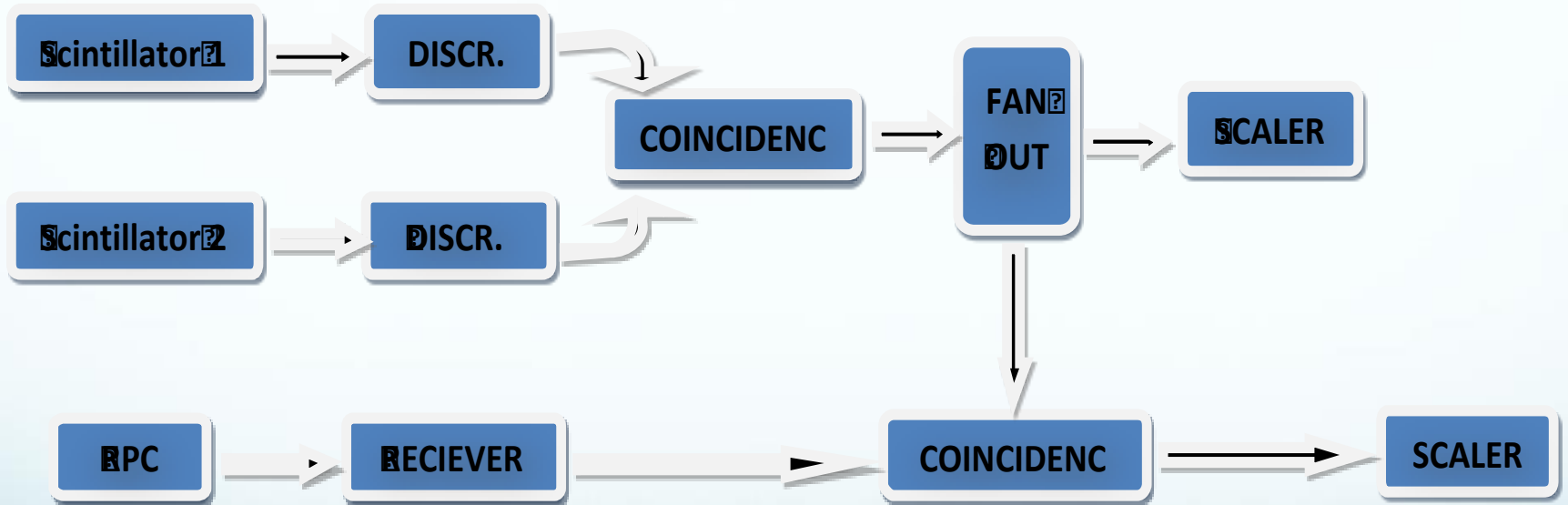




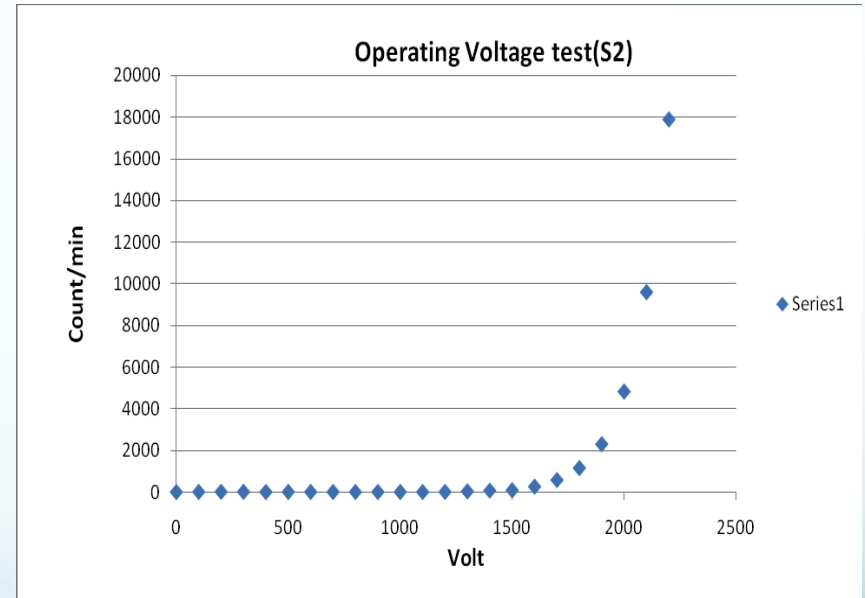
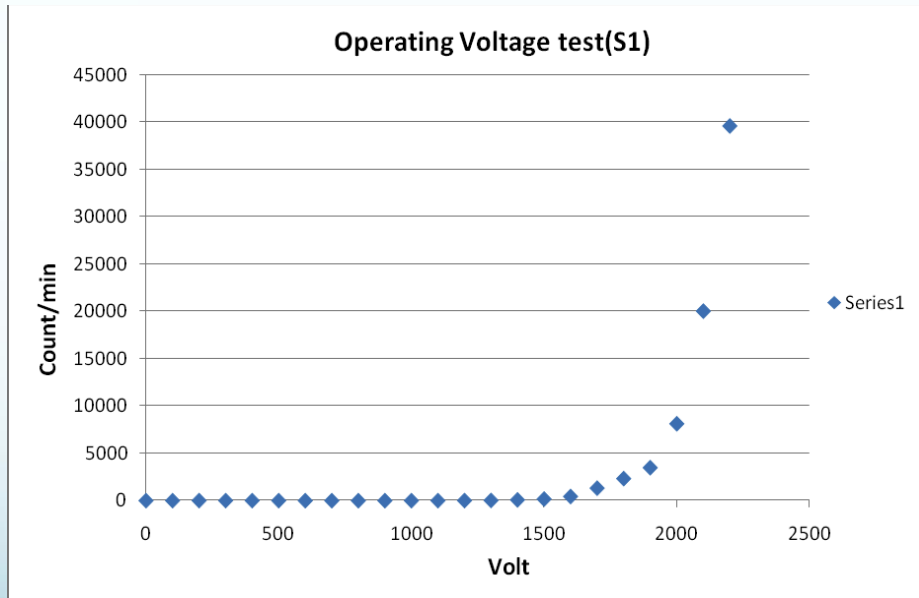
# HV scan for RPC parts



- chamber performance test with cosmic:



# Calibration of scintillator



# Our plan

- Transfer the hardware to Helwan.
- Complete the installation of the all hardware needed.
- Complete the set-up of the telescope (hardware and software).
- run the DAQ system (the same used in GIF) and applied the necessary modifications.
- test the RPC performance with cosmic muon (spare chambers from CMS Endcap have been requested to CMS- RPC collaboration).