



TileCal's High Voltage System

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Tile Calorimeter

- TileCal – hadronic calorimeter
- High Voltage system → 10000 photomultipliers
- A photomultiplier converts incident photons into an electric signal

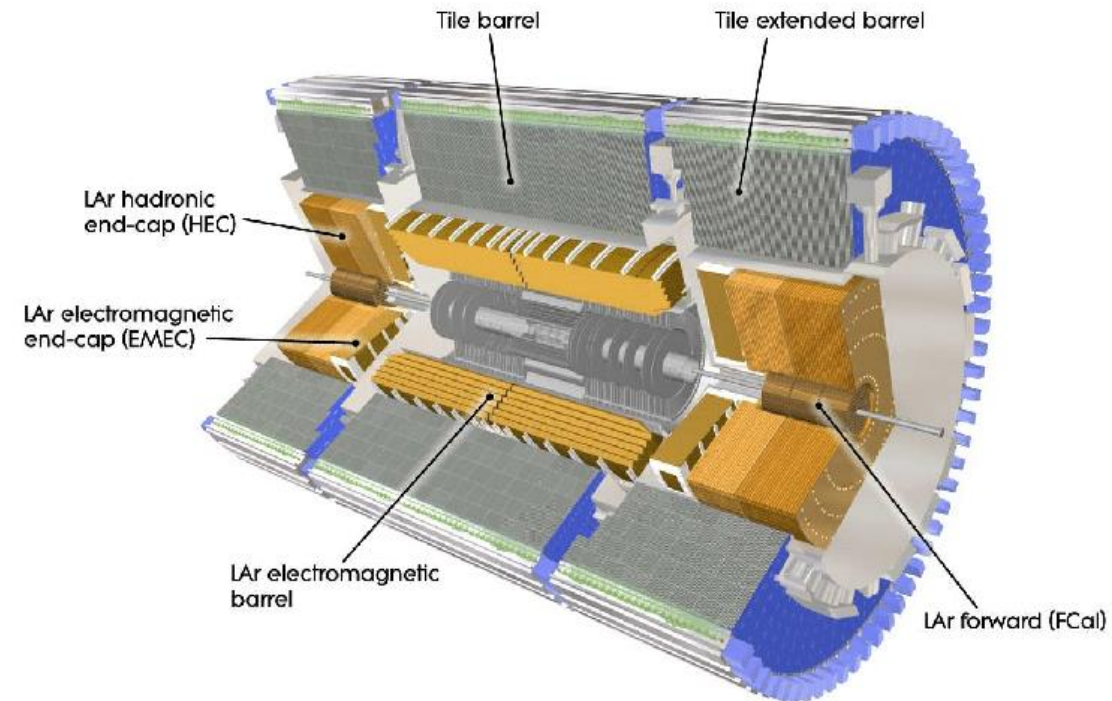
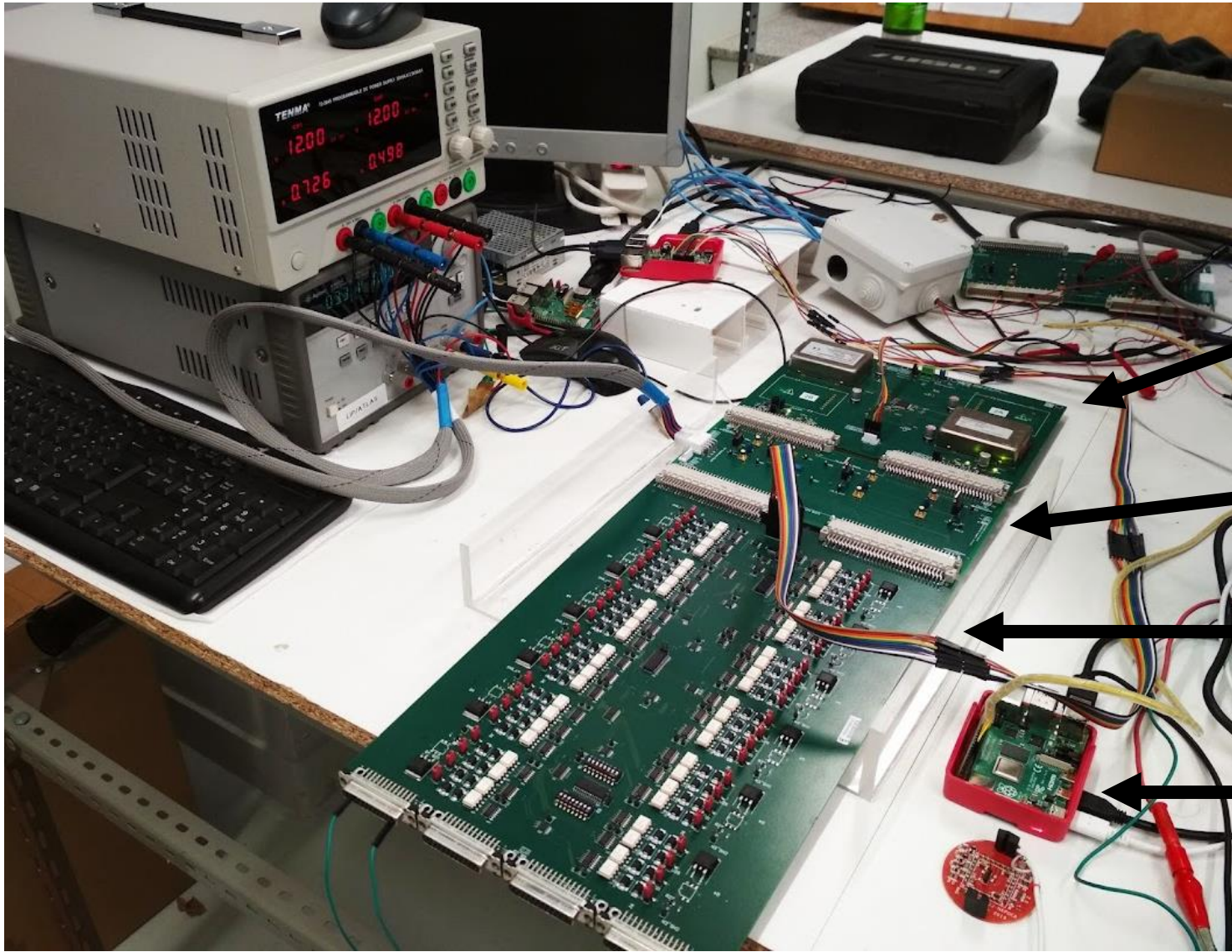


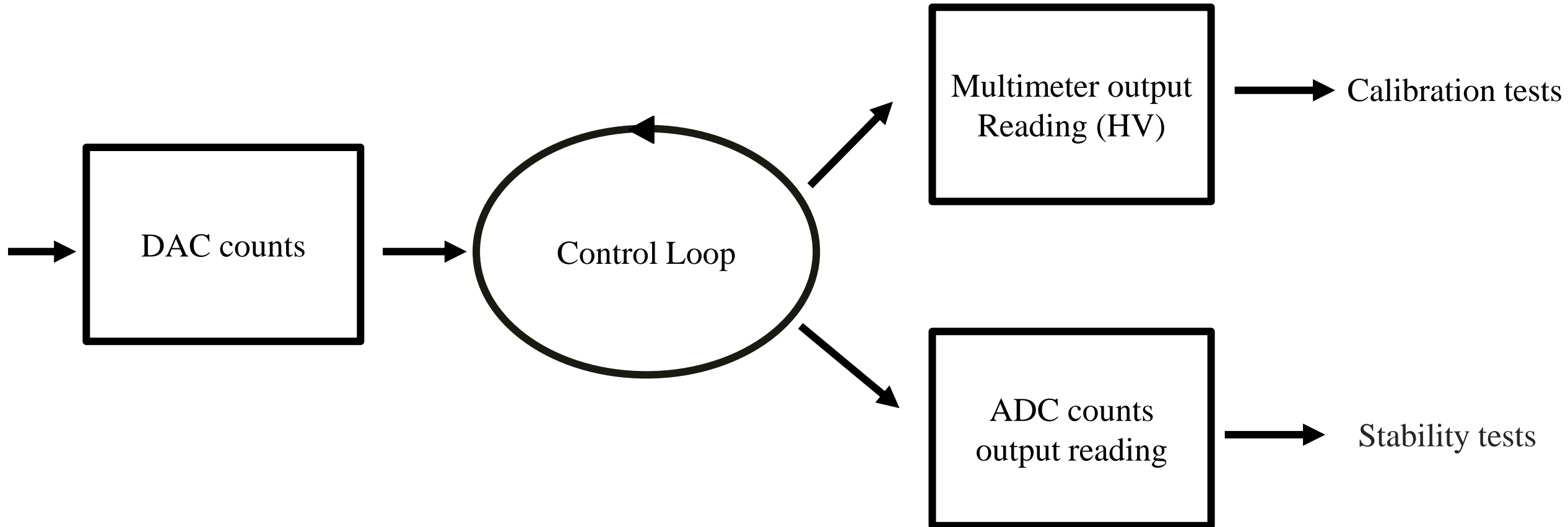
Fig. 1. A cut-away view of the ATLAS calorimeters. The TileCal consists of one central barrel and two extended barrels.



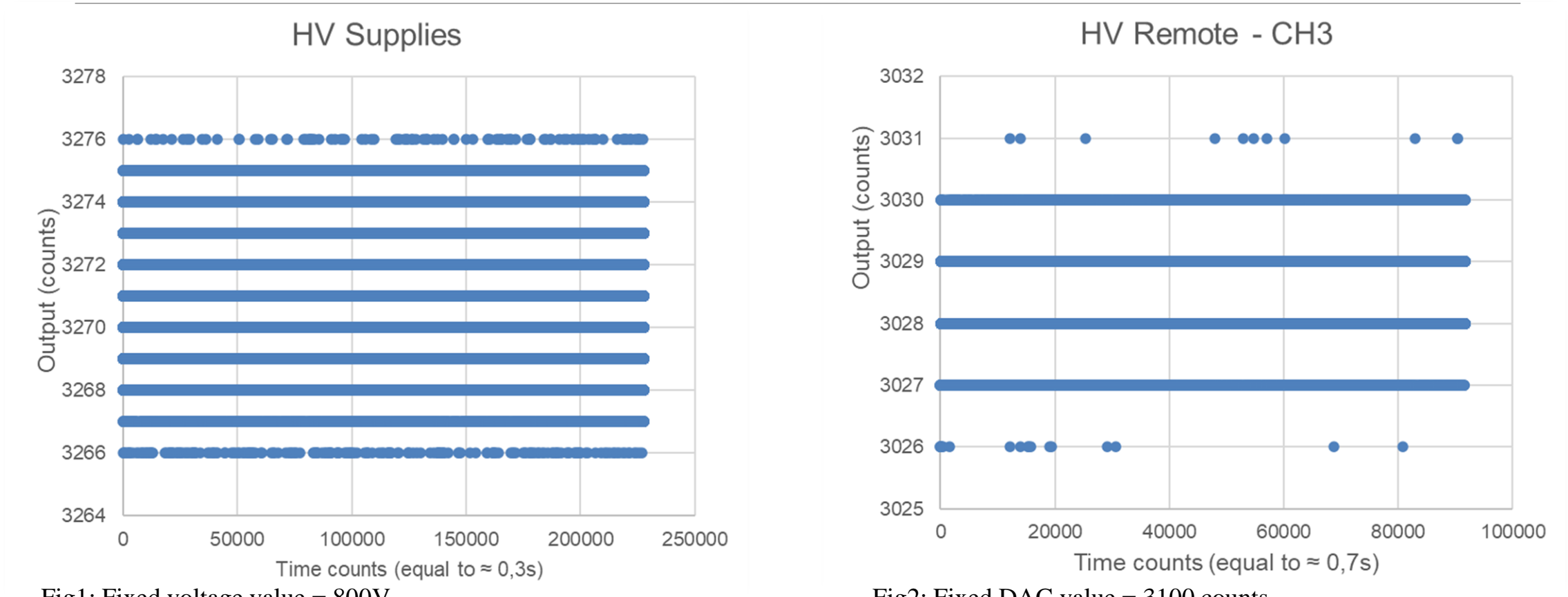
High Voltage system setup

1. HV Supplies;
2. Adapter board;
3. HV Remote;
4. Board control device.

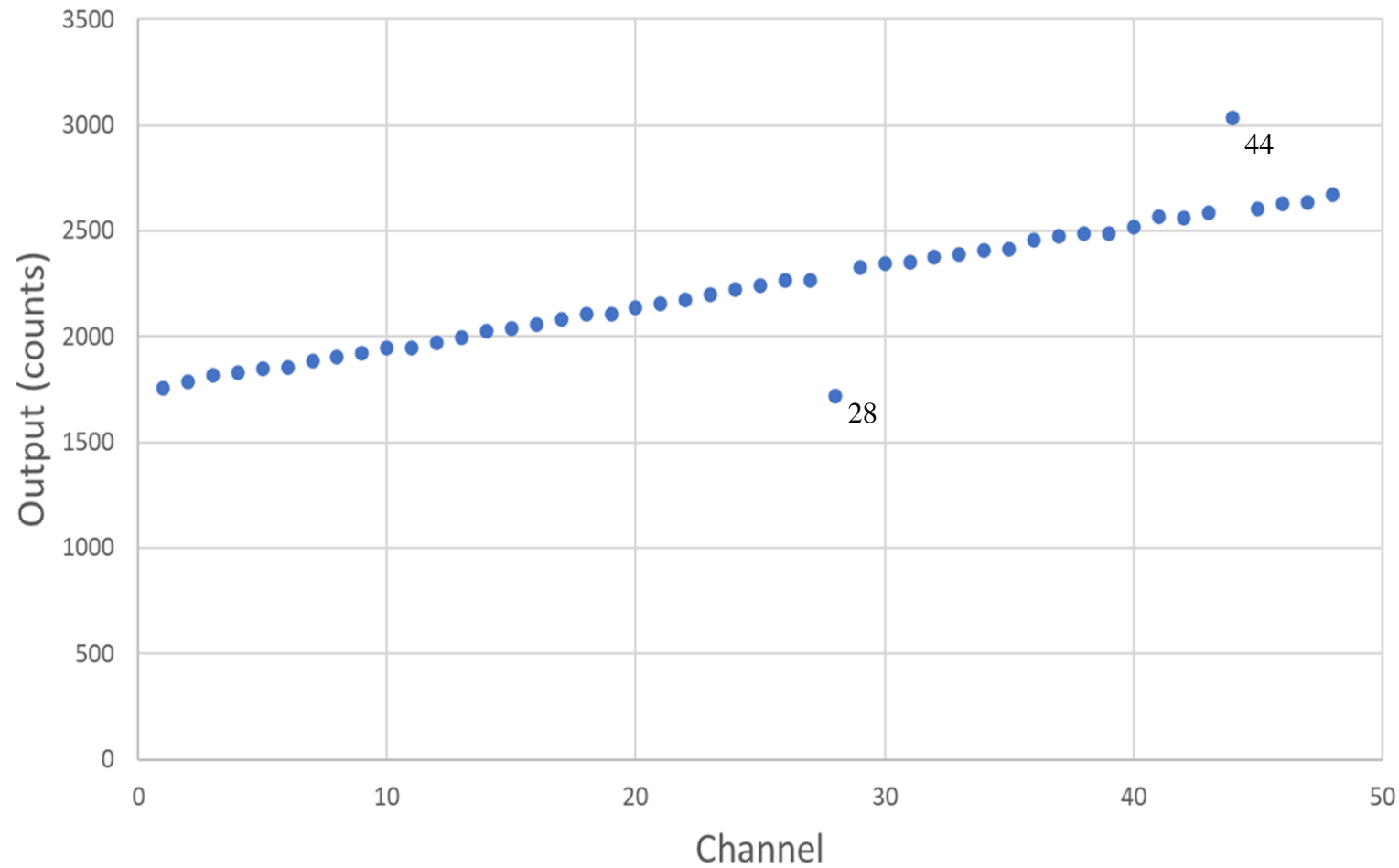
HV Remote diagram



Stability test



Note: The stability test lasted 18 hours.



HV Remote mapping test

Calibration test

1. Output voltage is set using DACs;
2. Output voltage increased linearly with DAC value;
3. Read the channel's output with a voltmeter;
4. Trace a graph to obtain the equation from the trend line;
5. Apply the equation to calibrate the channel.

Calibration test

