



# Status of DC4, Plans for preparation of DC0/1/4

TB meeting, Feb 8, 2022

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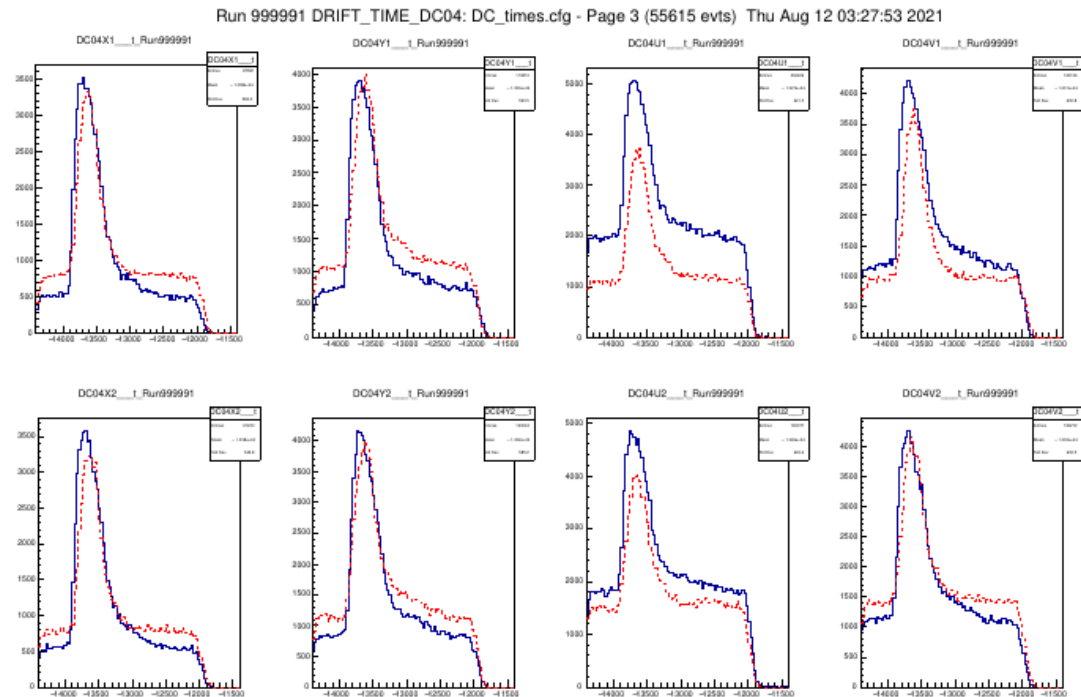
# DC4 Status

## ■ Status in 2021

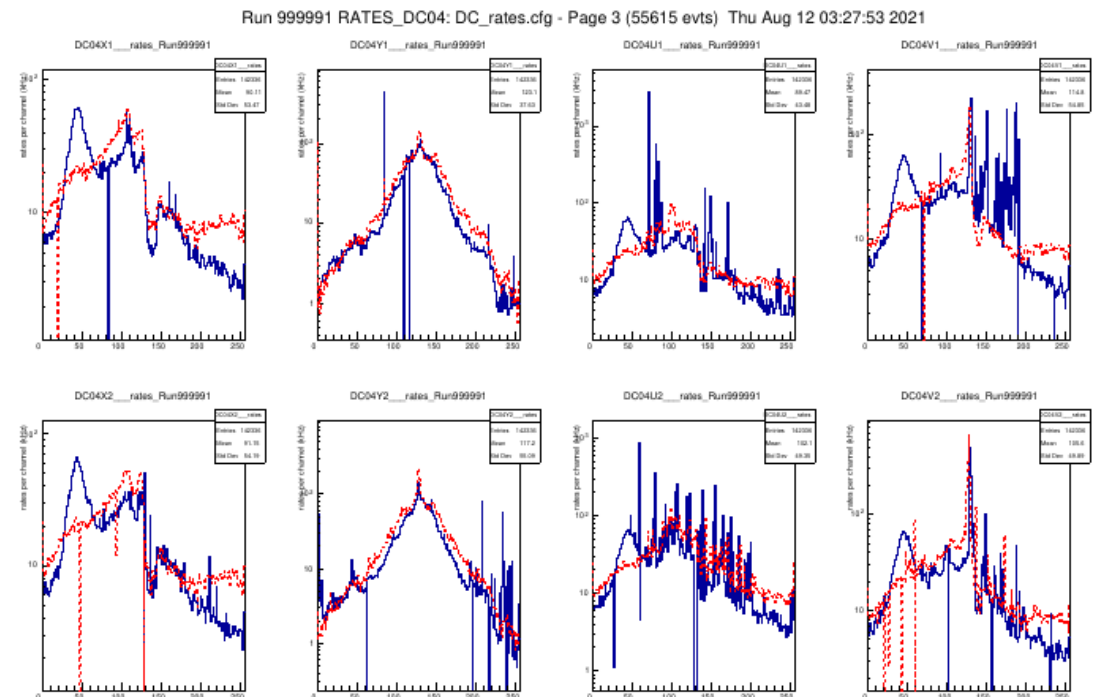
- March 2021 : Detector moved in 888, installed and tested in April.
- July 2021 : Short in YY' found, due to a broken wire. YY' switched off. Noise seen already in July (Logbook).
- August 2021 : Detector moved to Clean Room, broken wire removed, brought back in 888.
  - Note: noise tests were done in the Clean Room, before moving the detector
- Sept 2021 : Noise remains in DC4, all planes – next slide....

# Noise in DC4, as seen during the 2021 run (with beam)

## Drift times



## Rates per channel

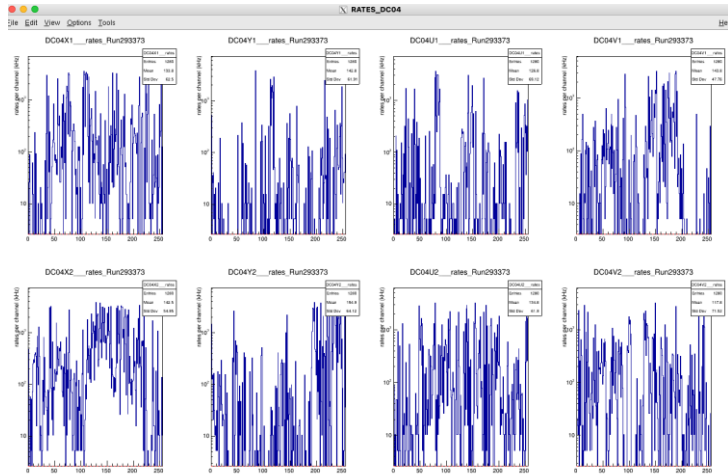


Origin of the noise unknown, apparently intensity changes with time (Logbook: “comes and goes”)  
During the run thresholds were raised, by -0.3 to -0.4 V (from -0.8 or -0.9)

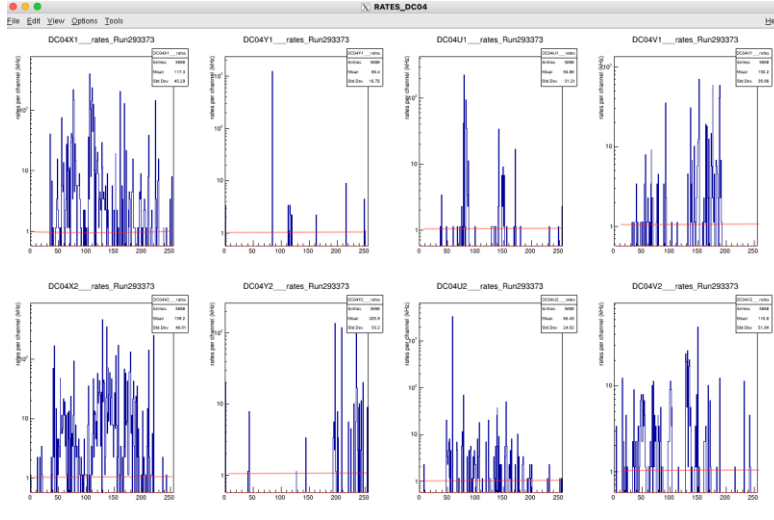
# Noise in DC4: Feb-2022

(LV, Air cooling, etc., ON, thanks to Vincent!)

Thresholds:  $-0.4\text{ V}$

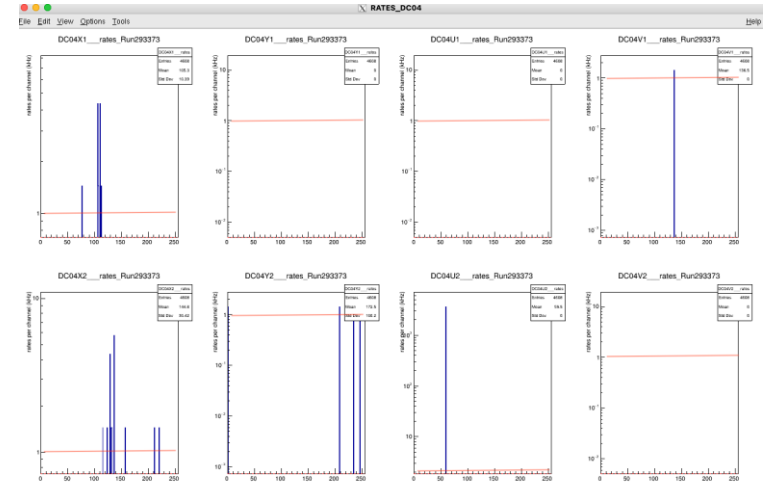


Thresholds:  $-0.6\text{ V}$



Red lines: 1 kHz mark

Thresholds:  $-0.8\text{ V}$  (nominal values)



Without beam, the detector behaves as it should. We can safely conclude that the noise comes from an external source.

The only way to understand its origin would be to periodically check DC4, after additional pieces of equipment are turned on.

Such tests can be more easily done locally at CERN.

## Additional plans for DC 0/1/4

- Remotely (in February):
  - DC0 and DC1: check FE status, noise behavior (must turn ON LV and Air cooling)
- Locally at CERN (Damien+Yann, beginning of April):
  - Additional checks and further preparation