

Status of the on-line data monitoring

Leonardo Pesce & Giorgio del Castello – Analysis Meeting 05/11/2025

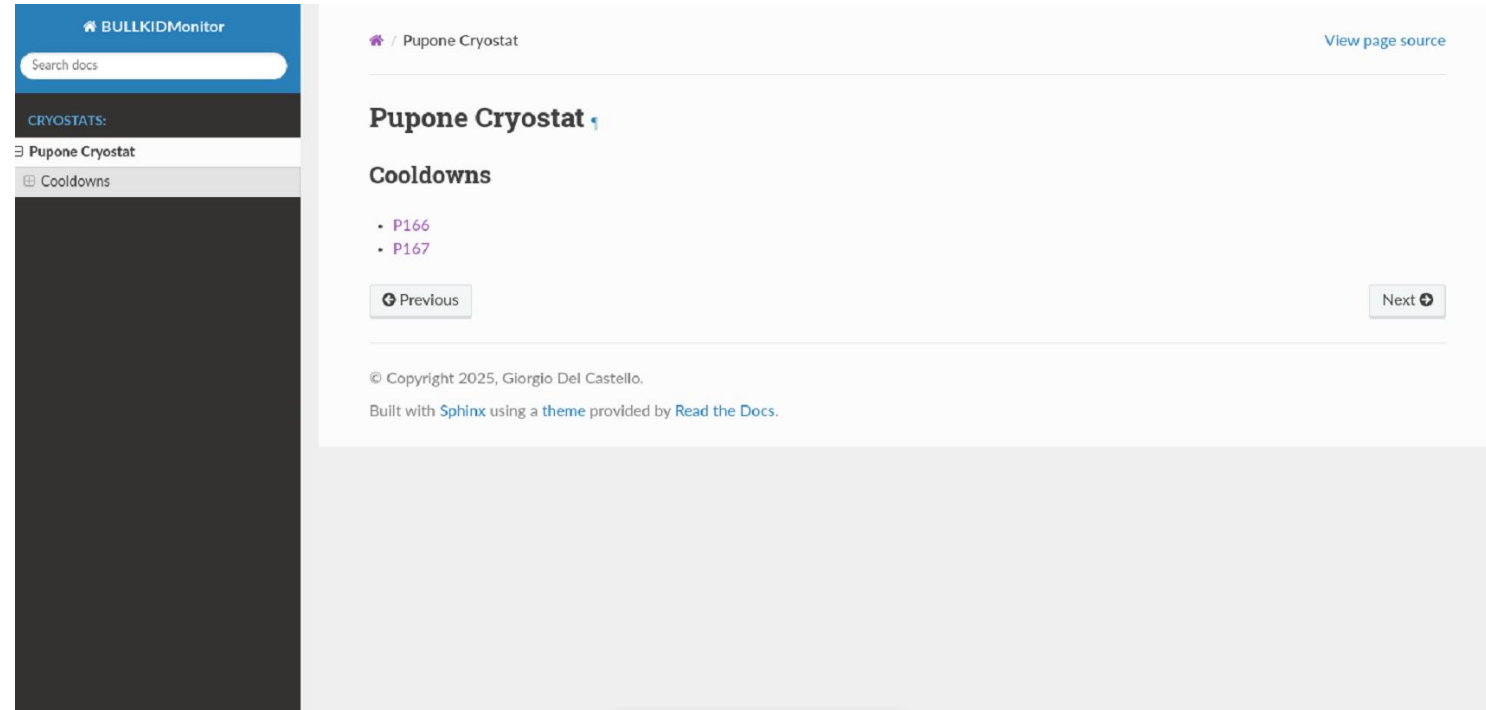


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On-line monitoring: motivations

- To have a **standard** and relatively **fast** analysis procedure.
- Developed with standard **DIANA**.
- On-line **interactive plots** visualized on dedicated **site**.



data_quality.py

```
[calder1] ~/caldersw_new > python3 pycalder/pat/data_quality.py -run 831694 -ds 8078 -v -0 -E 50000 -r False -p False -n False -h
usage: data_quality.py [-h] -run RUNNUMBER -ds DATASET [--line LINE] [--tm SAVE_TO_MONITOR] [-rd RAWDIR] [-st STORAGEDIR] [--anadir ANADIR] [--calibfolder CALIBFOLDER]
                        [--plotfolder PLOTFOLDER] [-cfg CFGDIR] [-r READER] [-p PREPROCESS] [-c CIRCLE] [-n NPSD] [-v] [-E EVENTS] [-O] [-A ANALYSIS] [-P PRINTSTEP]
                        [-t TIME]
```

- Now based in **caldersw/pycalder/pat/data_quality.py** (**in progress**)
- Most important settings to remark:
 1. **run** → Set the run number you want to monitor
 2. **ds** → Set the dataset
 3. **r** → Enables the reader (to do only once)
 4. **p** → Enables the preprocess (to do only if you need to reanalyze data)
 5. **n** → Enables the average noise power spectrum
 6. **c** → Enables the circle_dump macro. This is set False by default (**still to fix the default directory of the circles**).
 7. **h** → It helps you to understand all the other settings

data_quality.py

```
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                        [-t TIME]
```

This program will provide:

1. PDF files containing all plots of each channel
2. Some html files to build the website
3. This will be stored in the Plots directory

web_data_quality.py

```
[calder1] ~/caldersw_new > python3 pycalder/pat/web_data_quality.py -h
usage: web_data_quality.py [-h] -run RUNNUMBER -ds DATASET -c COOLDOWN [-cryo CRYOSTAT] [--plotfolder PLOTFOLDER] [--webfolder WEBFOLDER] [-v]

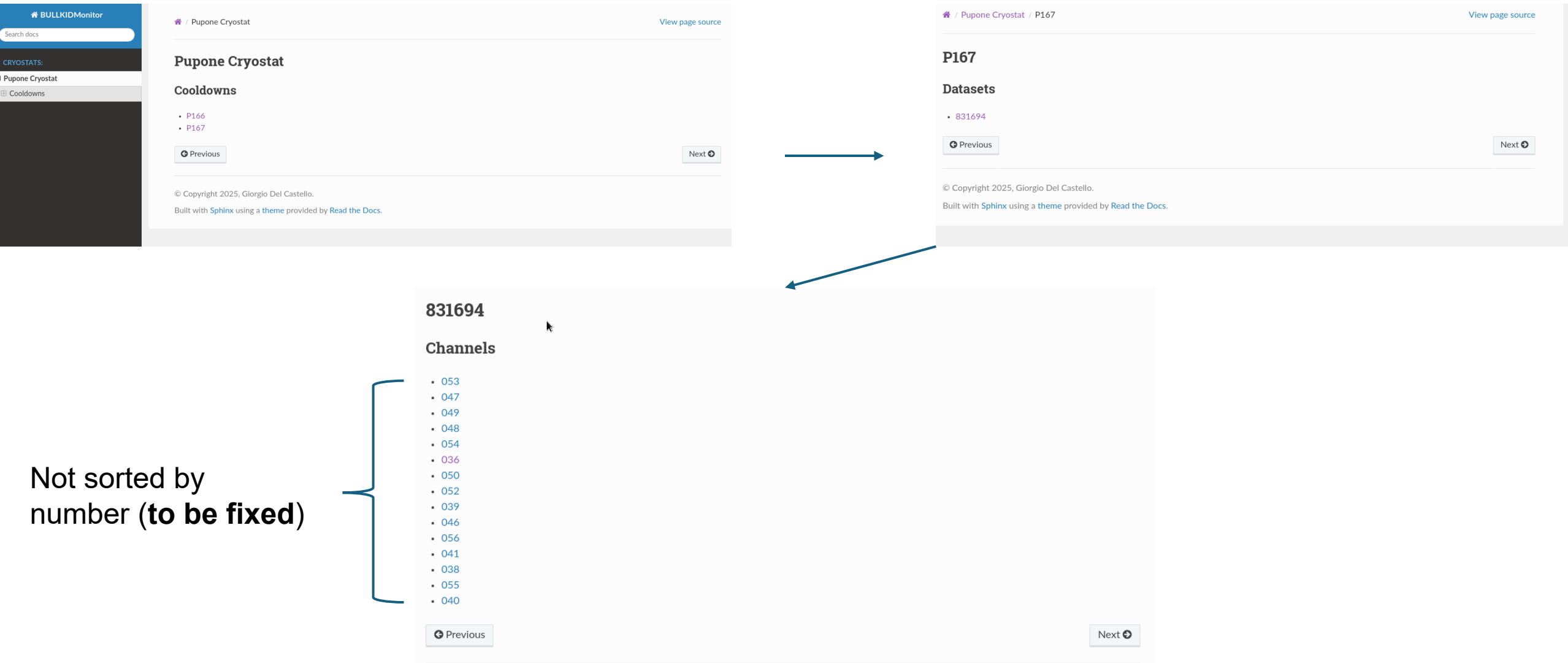
Python script used to update the website data quality plots

optional arguments:
  -h, --help            show this help message and exit
  -run RUNNUMBER, --runnumber RUNNUMBER
                        Run to analyze (default: None)
  -ds DATASET, --dataset DATASET
                        Dataset number (default: None)
  -c COOLDOWN, --cooldown COOLDOWN
                        Cooldown (default: None)
  -cryo CRYOSTAT, --cryostat CRYOSTAT
                        Cryostat Name (default: Pupone)
  --plotfolder PLOTFOLDER
                        Path containing all the plots (/criolab/data/BULLKID/Plots/ds${DATASET}) (default: None)
  --webfolder WEBFOLDER
                        Path containing the website (default: /criolab/data/BULLKID/website/source)
  -v, --verbose          Enable verbosity (default: False)
```

Used to build the actual website (similar parameters to data_quality.py). You run after data_quality.py.

Go to .../BULLKID/website/build/html/index.html and click on the web-site!

Web site



Web site

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Plot Index

- CPBaselineRMSVSTime
- CMBaselineRMSVSTime
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- CPMaxBaselineVSTime
- CMBaselineVSTime
- CPMaxBaselineHIST
- CPMaxBaselineVSTime
- EventRate
- CPDecayTimeVSCPMaxBaseline
- NPSDCalibratedPhase
- CPRiseTimeVSCPMaxBaseline
- NPSDCalibratedMagnitude
- CPRightLeftBaselineVSCPMaxBaseline
- CPMaxBaselineHIST
- EventRate
- NPSDCalibratedPhase
- NPSDCalibratedMagnitude

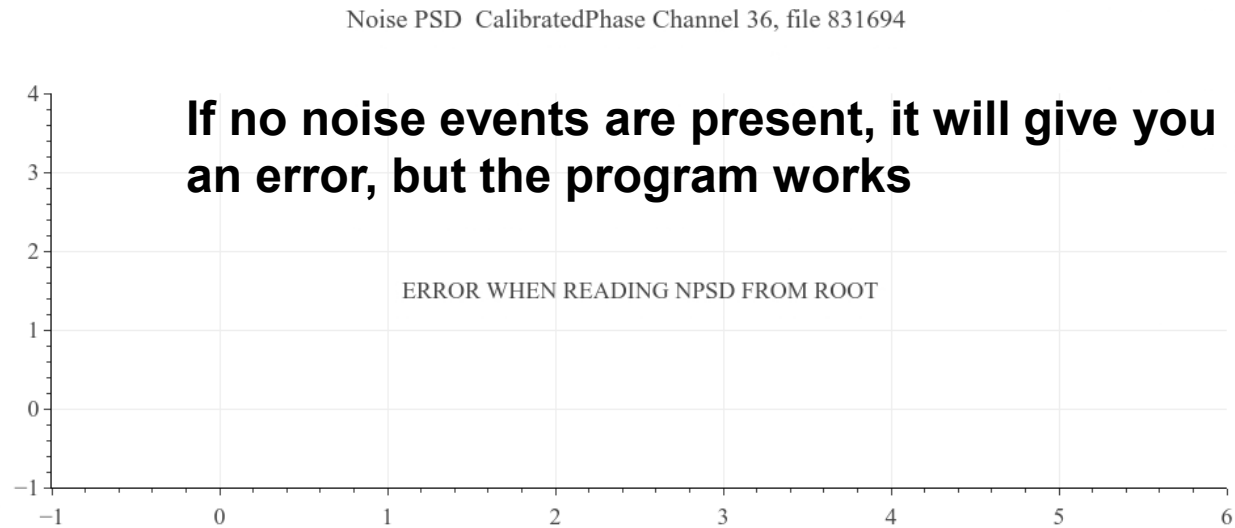
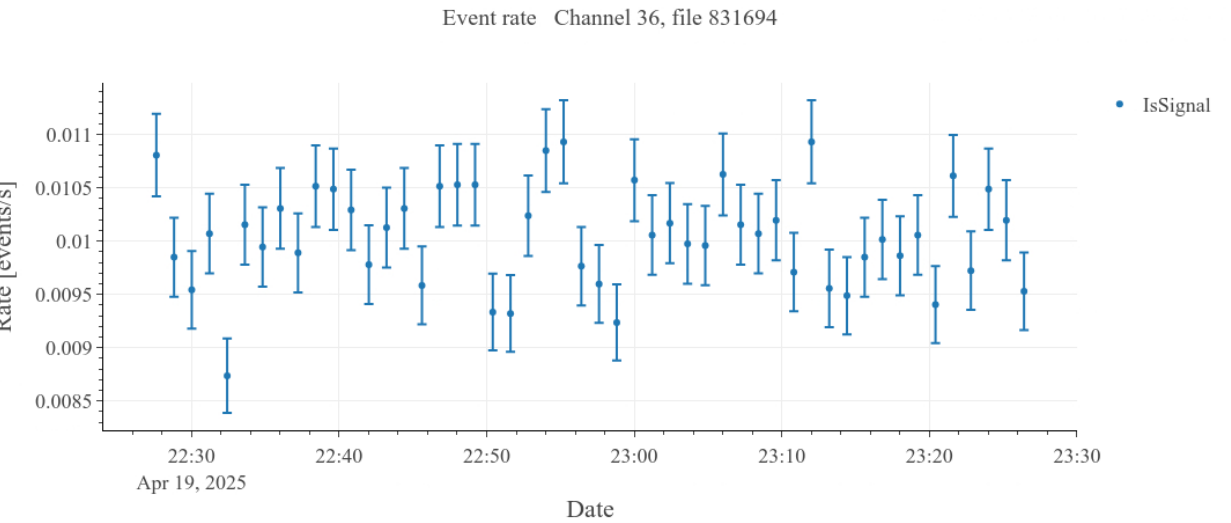
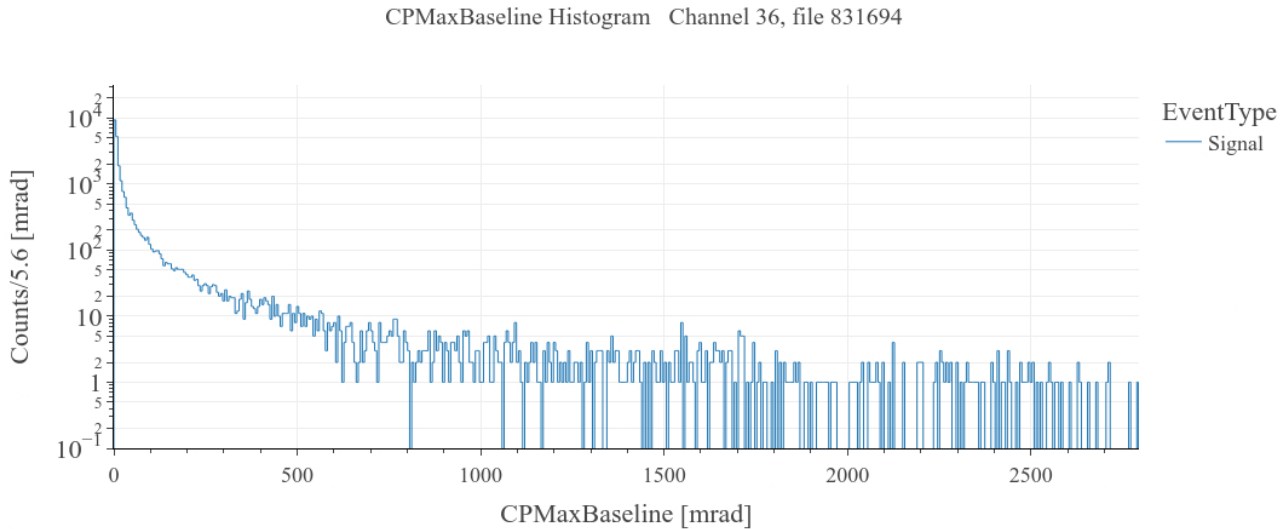
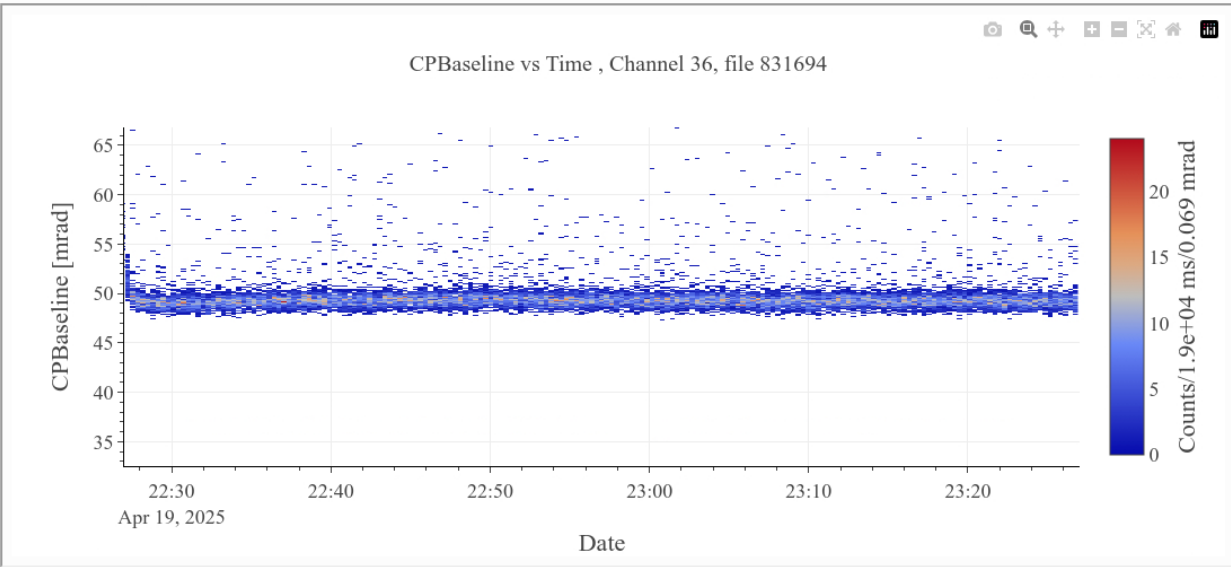
These plots are automatically produced for each channel

They are meant as fast-check control

We are still working on the automatic best cuts to apply

They will be plotted using Plotly → Usual interactive plots of pydiana framework

Web site



Thank you !