

Common mode correction for Epix100a in exp=xppn4116: run=137

Dataset and source

exp=xppn4116:run=137

/reg/g/psdm/detector/data_test/types/0020-XppGon.0-Epix100a.1.xtc

XppGon.0:Epix100a.1

Event 8 (counting from 0) for all plots.

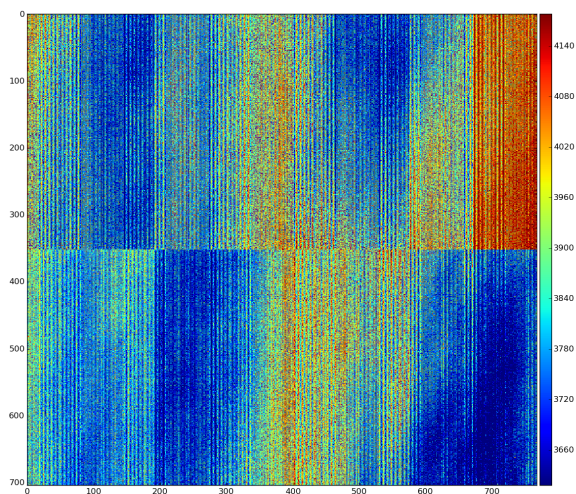
Note: Silke believes this data currently (Sep. 9, 2016) has non-optimal pedestals, which is likely the reason the common-mode cutoff (fourth parameter) needs to be increased from 10 to 30.

Calibration

Use original calib directory /reg/d/psdm/XPP/xppn4116/calib

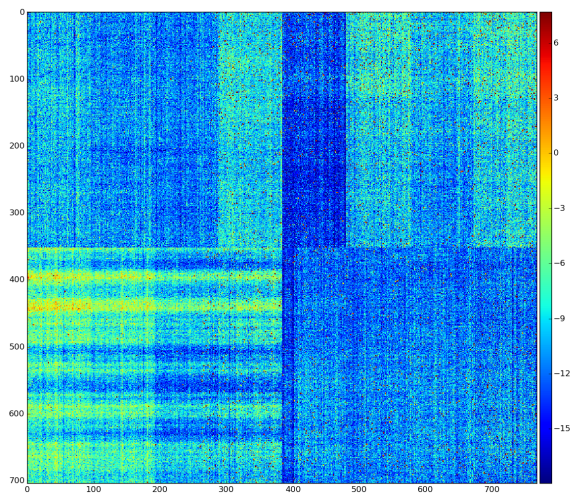
Raw data

ave=3804.986 rms=186.705



Data - pedestals

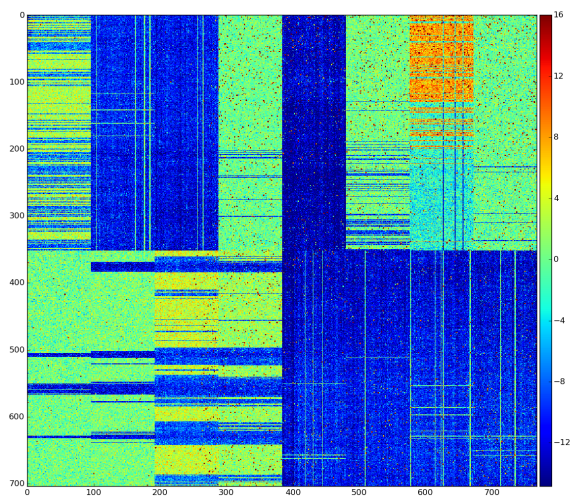
ave=-9.398 rms=8.544



Apply versions of common mode parameters

Default

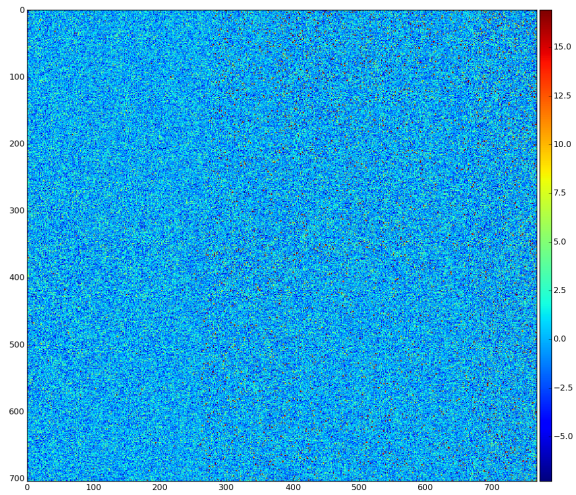
```
nda_cdata = det.calib(evt) # default cmpars=(4, 7, 30, 10)
```



cmpars=(4, 7, 30, 30)

```
nda_cdata = det.calib(evt, cmpars=(4, 7, 30, 30))
```

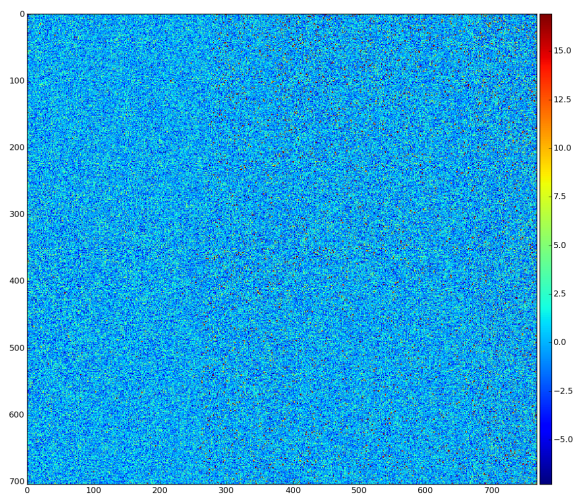
ave=0.786 rms=8.064



cmpars=(4, 6, 30, 30)

`nda_cdata = det.calib(evt, cmpars=(4, 6, 30, 30))`

ave=0.786 rms=8.064



Conclusion

- default parameters do not work well in this experiment because larger correction is required.
- there is no difference in results between `cmpars=(4, 6, 30, 30)` and `(4, 7, 30, 30)`.