Fast Application (10kHz) data with liberas

Commands from Suntao, John D., and libera documentations. Thanks a lot!

FA – Fast Application is 10kHz SPS, 0.25µm (X and Y) DAQ.

Option-1: Data acquisition using EPICS

```
export EPICS_CA_ADDR_LIST="sbpm01 sbpm02 sbpm03 sbpm04 sbpm05
sbpm06 cesr103 cesr104 cesr105 cesr106 cesr107 cesr108 cesr109"

export EPICS_CA_MAX_ARRAY_BYTES=5000000
```

```
caput LIBERA04:bpm1:fa.PROC 1      ! ----> will cause the FA waveform to fill, then
caget LIBERA04:bpm1:fa.X           ! returns 1024 data points
```

`LIBERA04:bpm1:fa.SCAN "I/O Intr"` ! fa waveform record will automatically fill with new values, i.e. a new set of values will be written to the waveform record at ~ 10 Hz.

The current value of `LIBERA04:bpm1:fa.SCAN` is `"Passive"`

Option-2: Libera machines

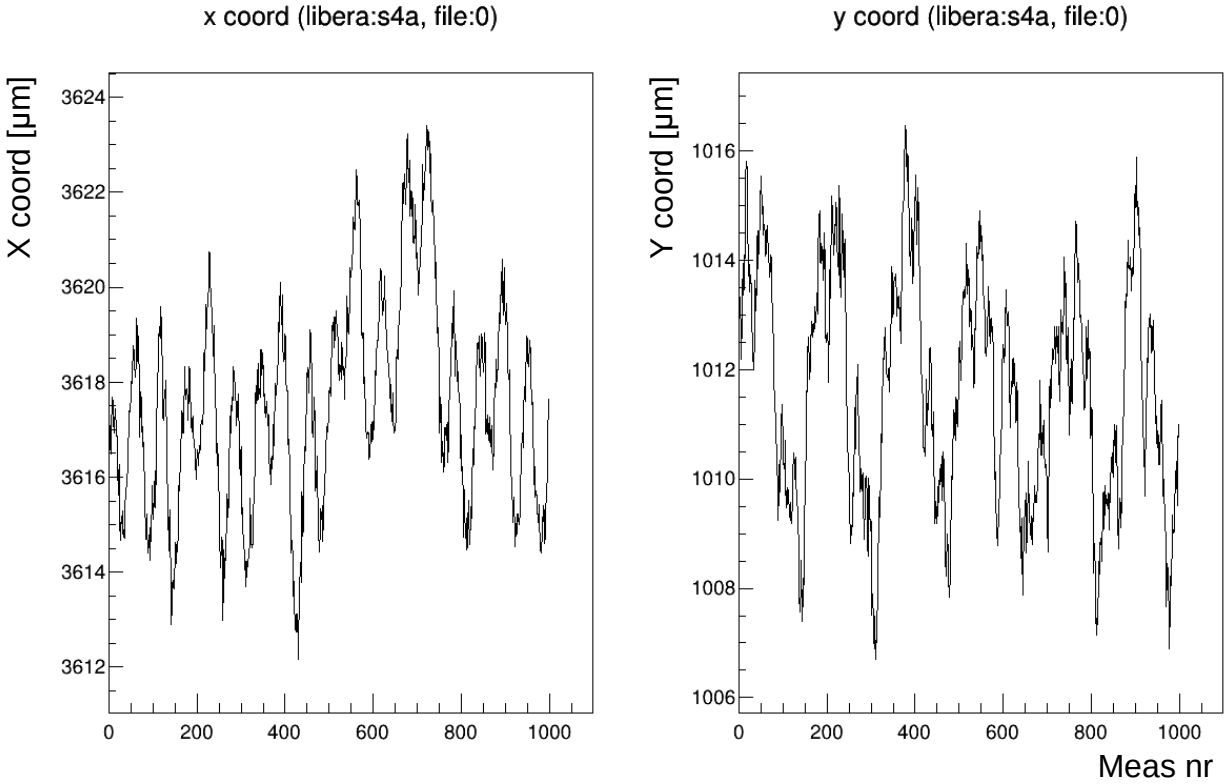
`ssh test@sbpm04` ! see more at https://cesrwww.lepp.cornell.edu/wiki/CESR/LiberaBpms

`libera-ireg signal boards.raf3.signals.fa -s1000` ! returns 1000 samples

`libera-ireg signal boards.raf3.signals.fa -s1048576 -r1024` ! 1M samples divided into 1K slices – never tried

Libera S4A, 10kHz 0.1sec data

Standard conditions



60Hz kicks from pulsed corrector: 49W