PQB meeting

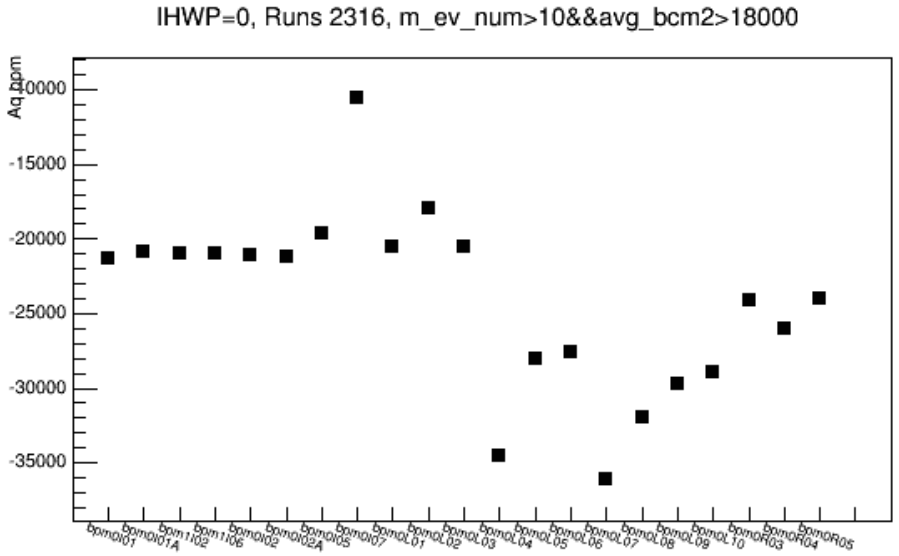
10/20/2016

Previously….

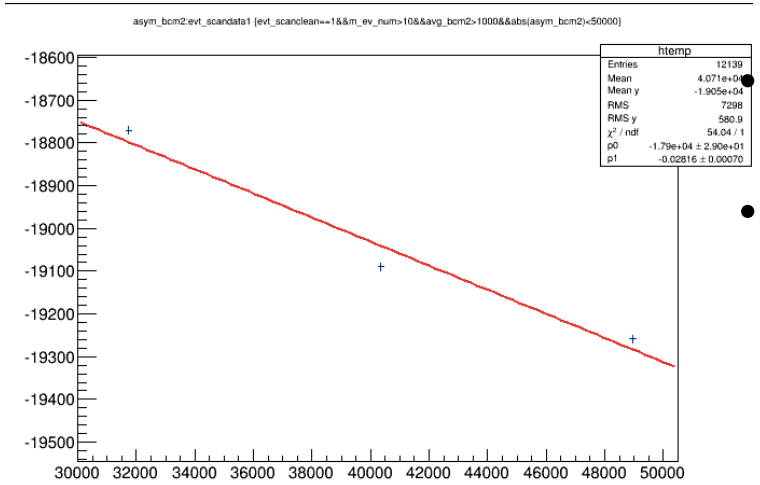
- With Hall A laser obtained position differences and charge asymmetries comparable to PREX BEFORE cathode rotation + PC translation
- Required photocathode rotation and subsequent PC translation to reduce position differences to PREX level
- Due to ’after pulse’ (the origin of which we’d very much like to understand) , HallC laser is now being used for Hall A beam
- CONFUSING this happening with HallC laser

20,000ppm charge Aq

HallClaserOct15_Run2316_IHWPout_RHWP0deg_40uAinHall_Pconpresumably



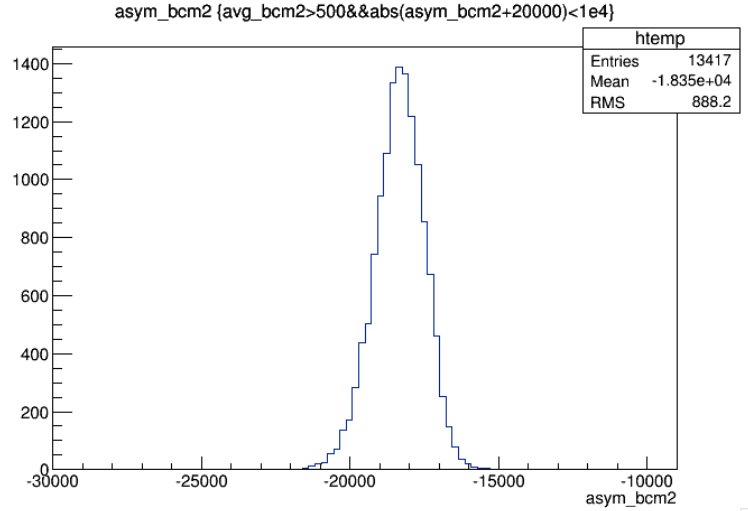
- PITA scan, PC on, RHWP 0deg



- Slope HallC laser -0.028ppm/count
- Usually Hall A laser +2.28ppm/count

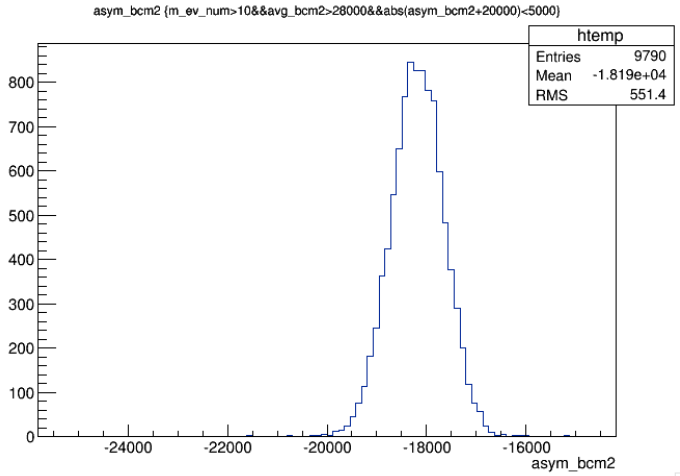
- Present in Hall even with PC off
- For RHWP 0deg -18,000ppm

HallClaserOct17_Run2370_IHWPout_RHWP0deg_PCoff_AqinHall



- For RHWP 22.5deg -18kppm

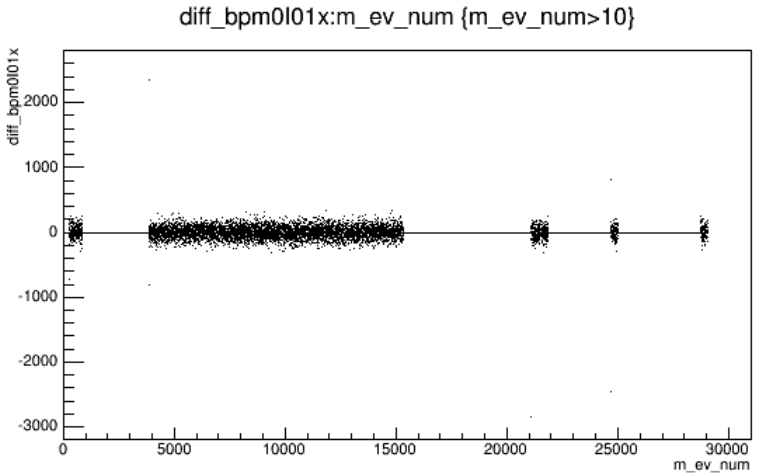
HallClaserOct17_Run2372_IHWPout_RHWP22p5deg_PCoff_AqinHall

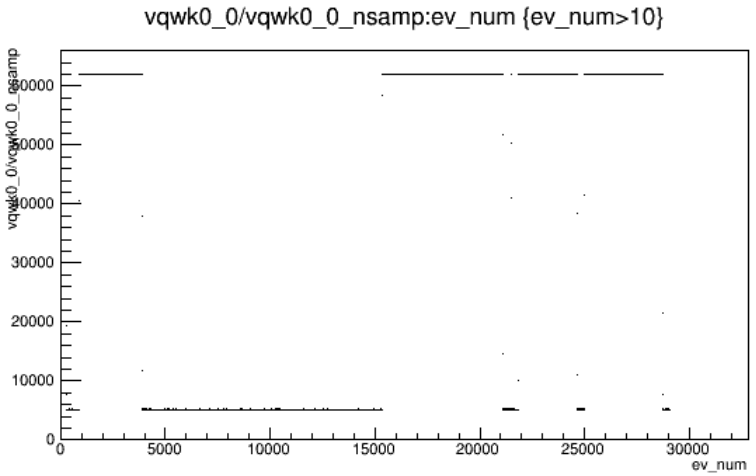


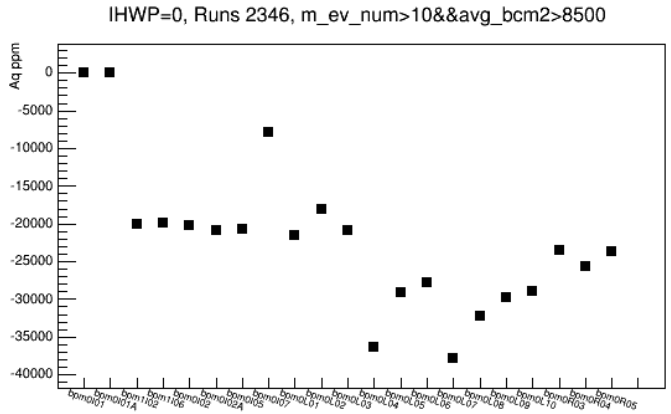
HallC laser confusing

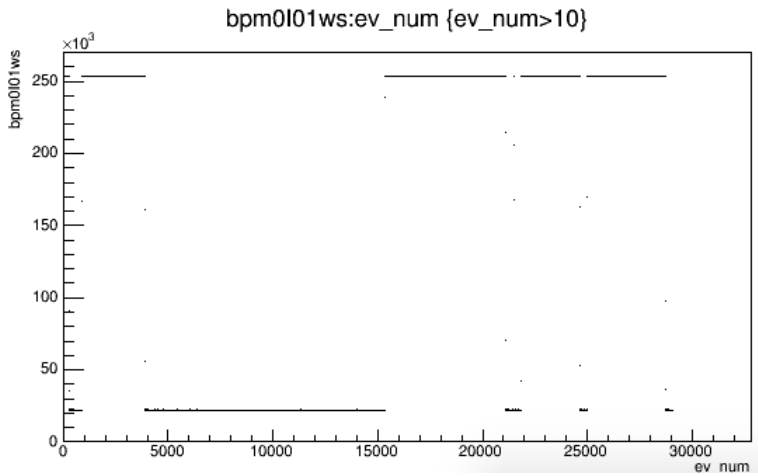
Autogaining on some bpms off?

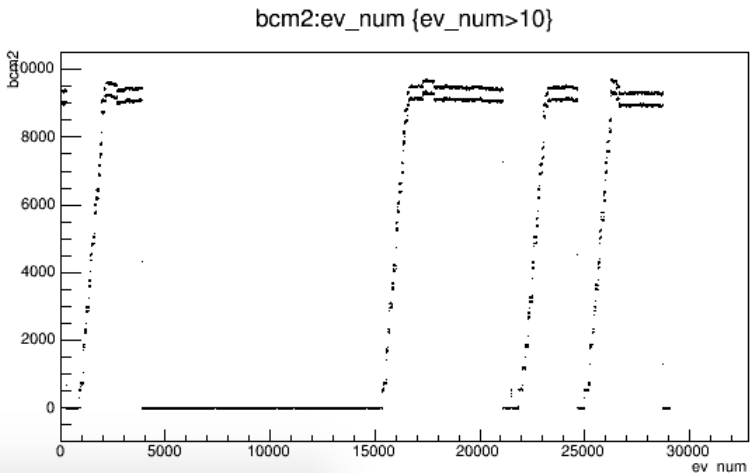
HallClaserOct17_2pm_Run2346_IHWPout_RHWP0deg_20uAinHall_PConpresumably_bpm0I01autogainingnotonperhaps





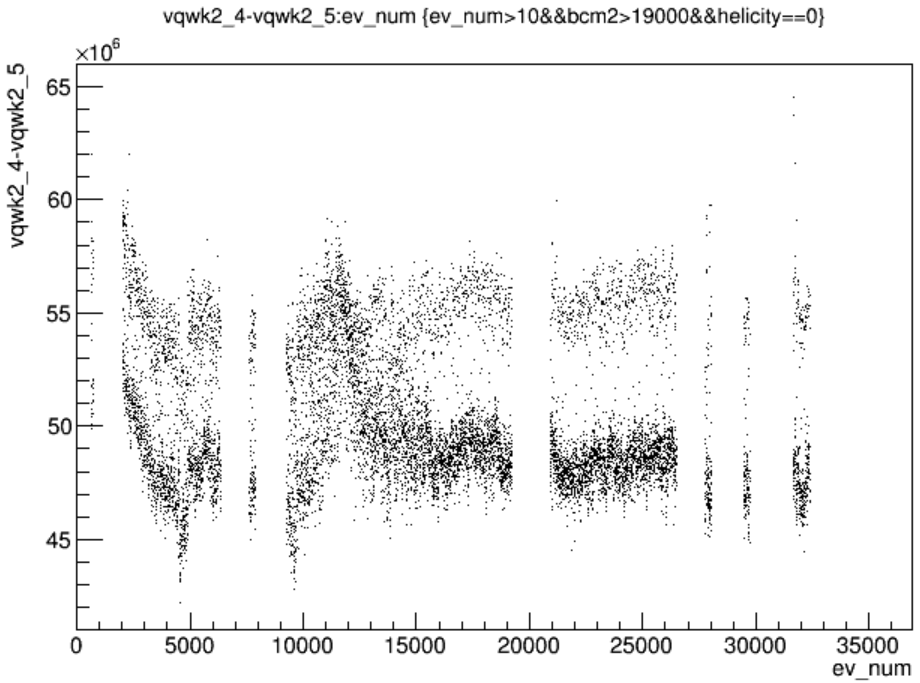


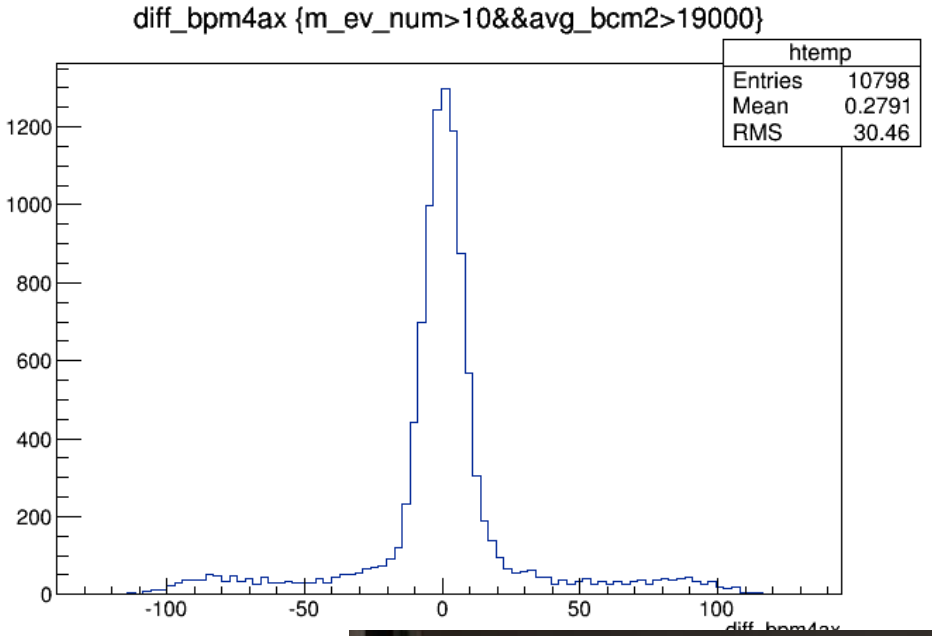




- bpm0I01A and bpm0I01 showed behavior of autogaining being off.

Bpm4a in hall still has 30mV jumps in X+ - X-

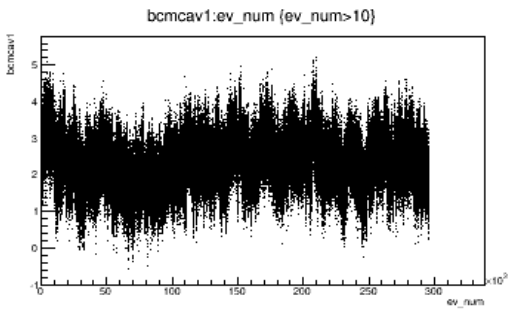


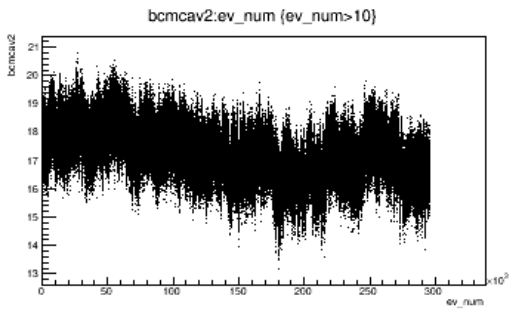


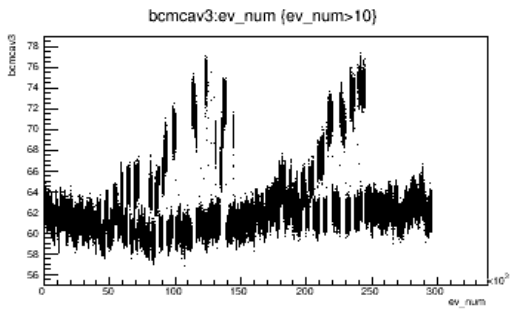
- Despite Pete Francis replacing modules, problem persists in beam, did not see with twiddle

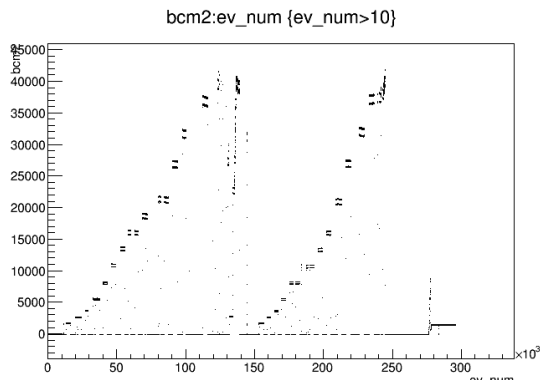
New Halla bpm cavities: some show signal, some not

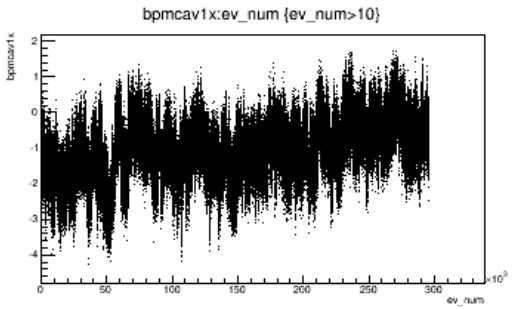
Run2741_CurrentCalibrationRun_BPMcavities.png.png

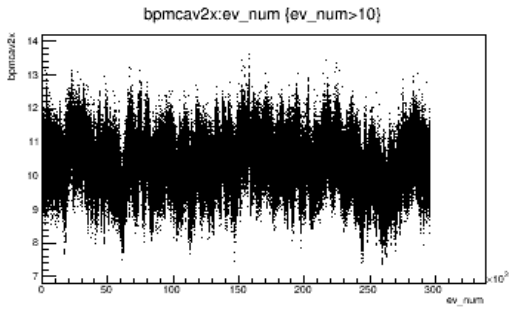


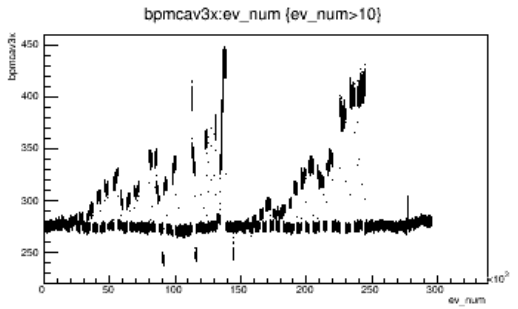


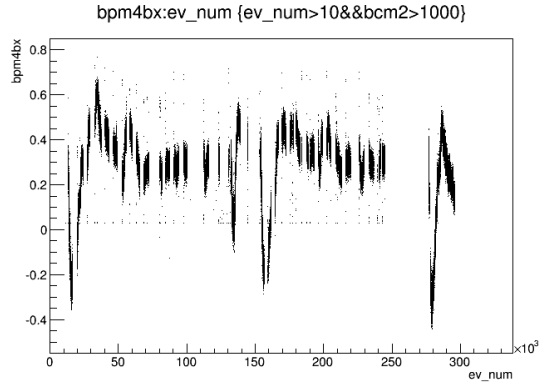


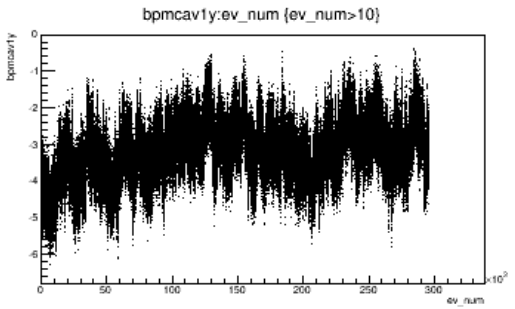


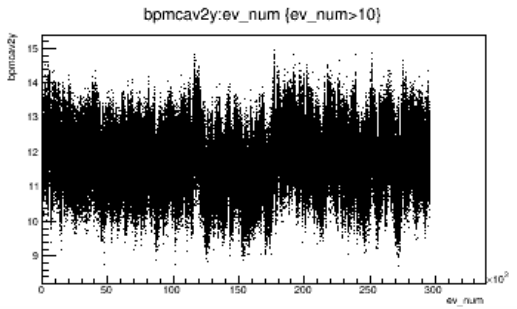


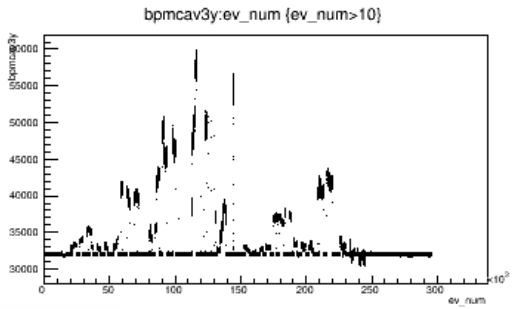


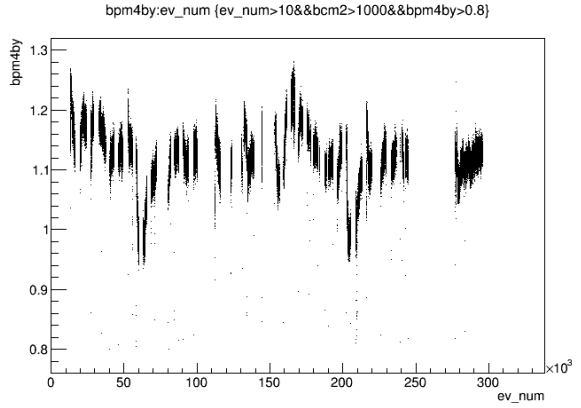






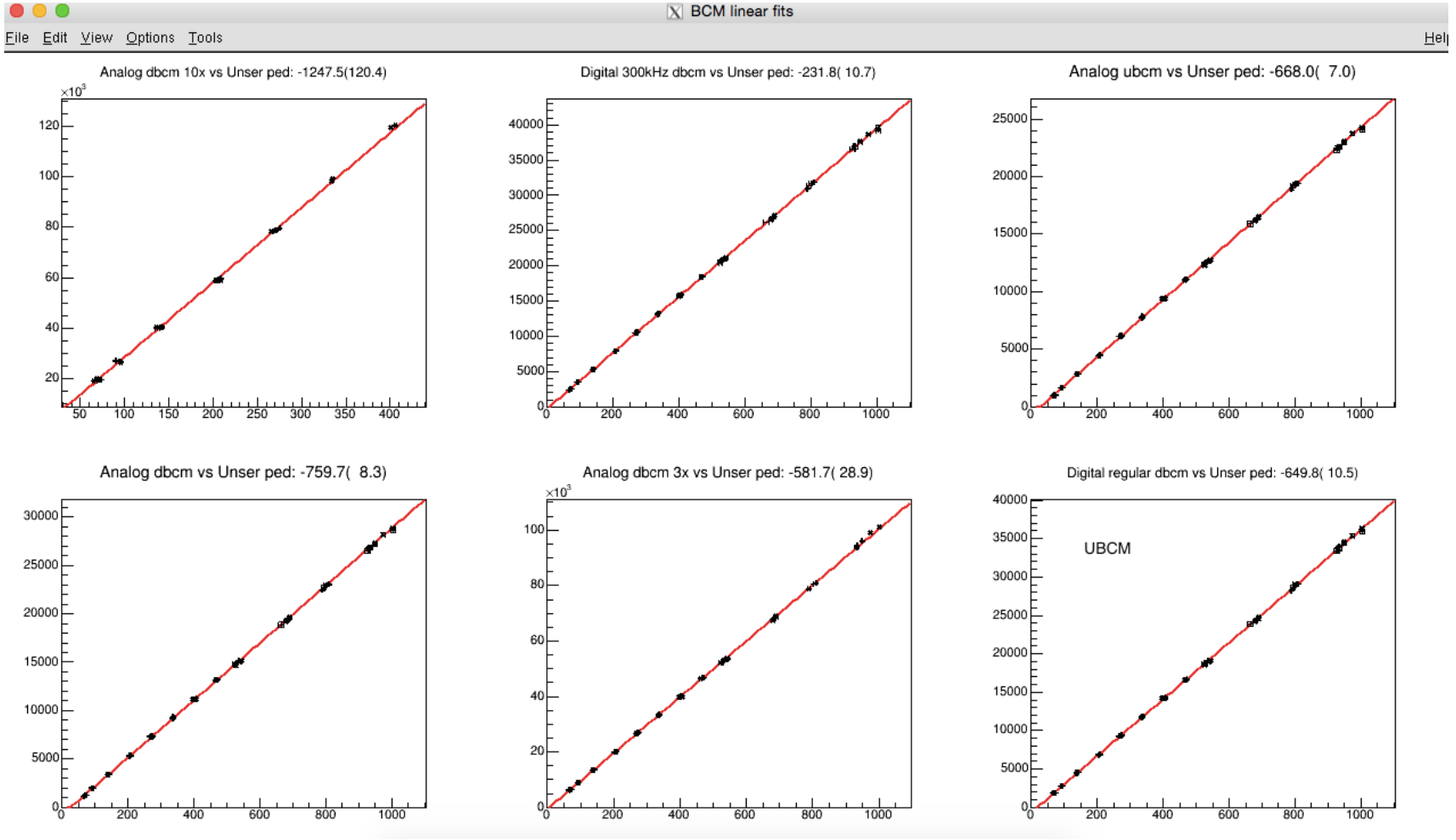






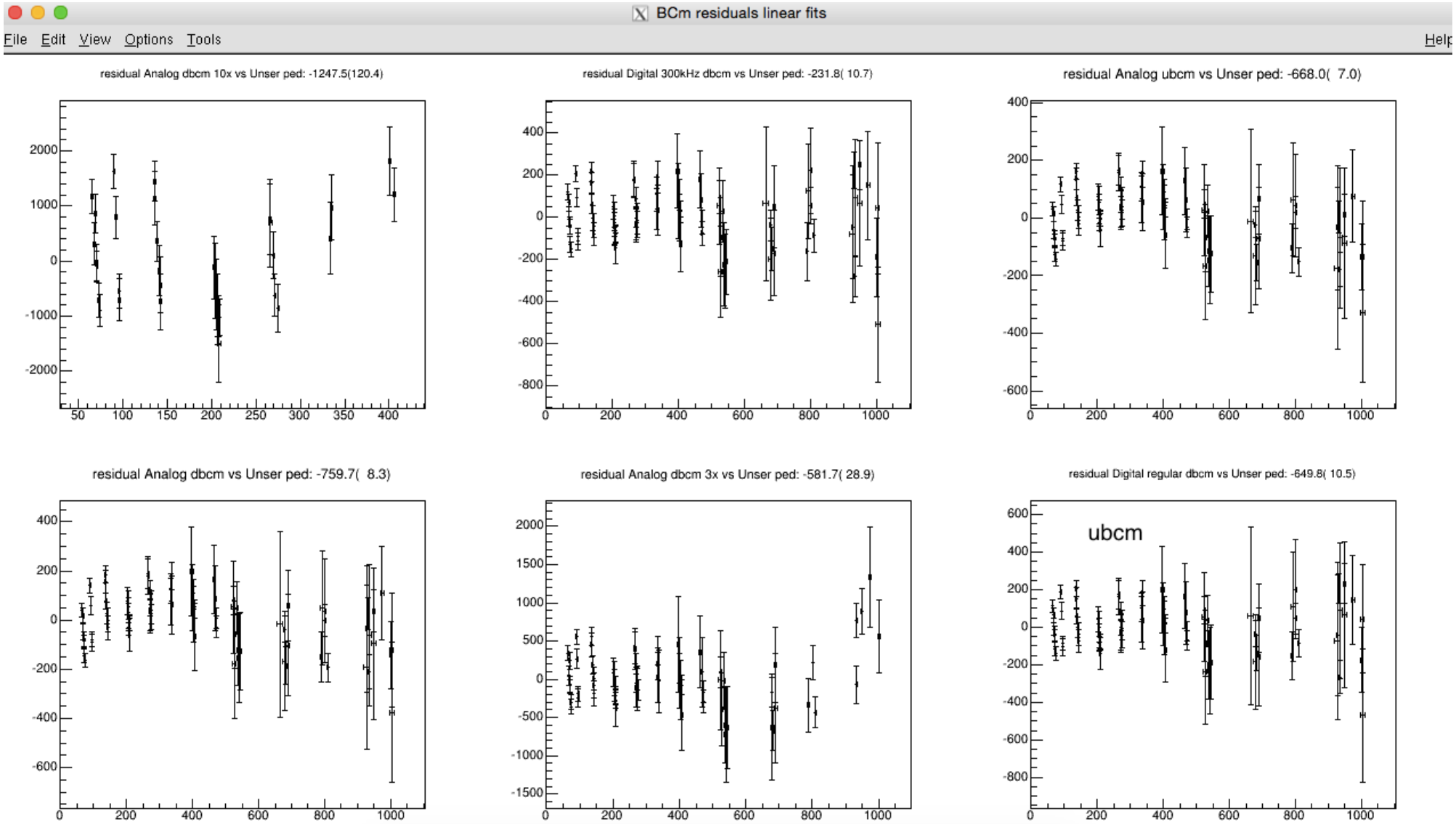
- Need amplitudes of signals tweaked on bpm4d
- Need a signal for bpm4b & bpm4c

Calibration Runs show no further saturation



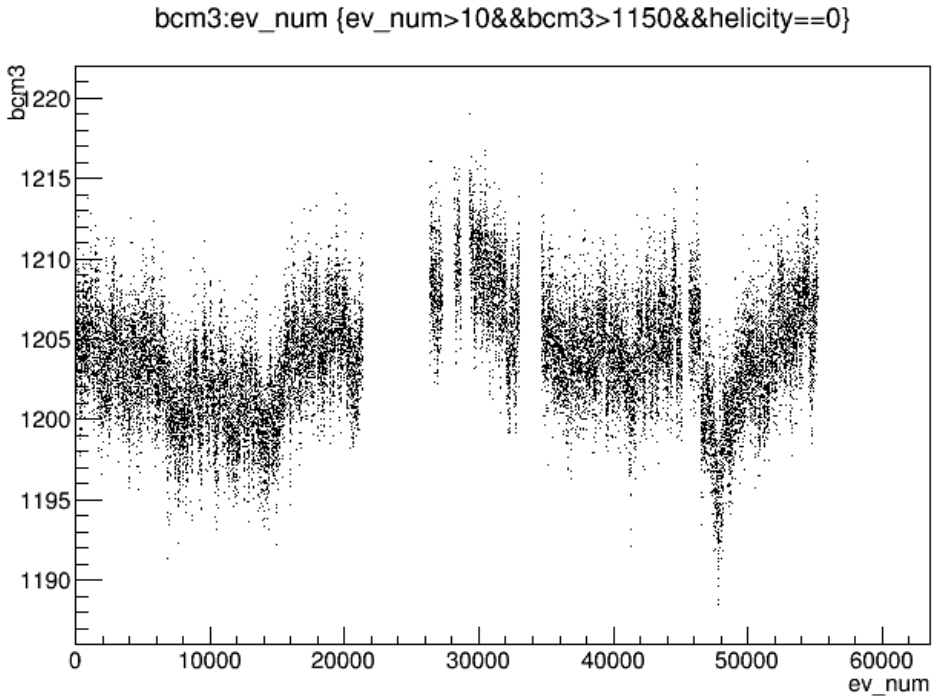
- When there were MCC phase/MO issues, digital bcms showed DC amplitude shifts (not RMS->DC converter like the analog), now that no phase issues, no DC shifts

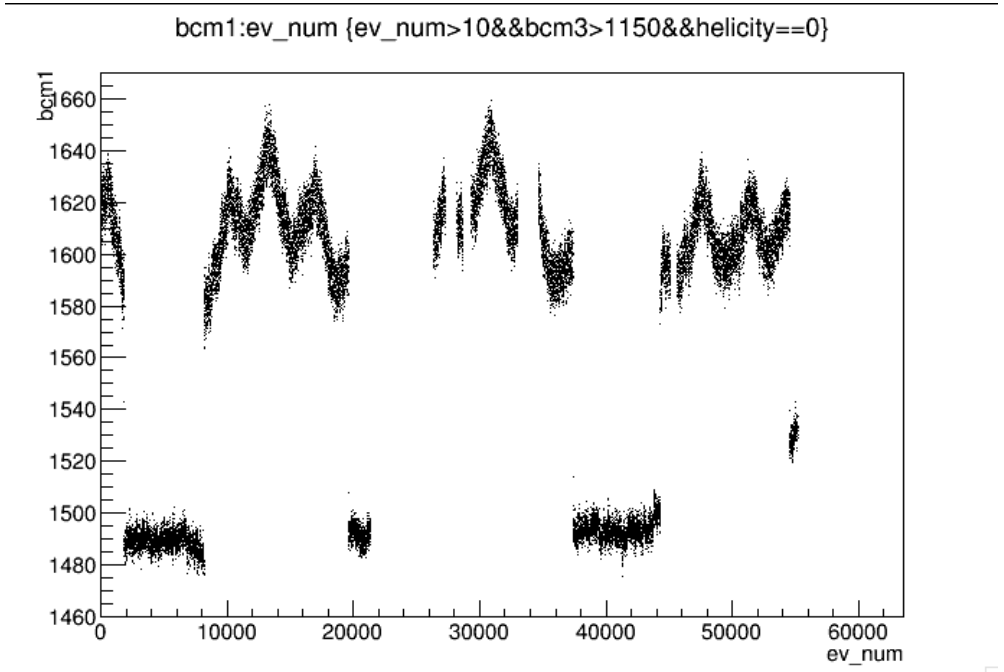
Calibration Runs show no further saturation



Analog didn’t see DC shifts when digital did

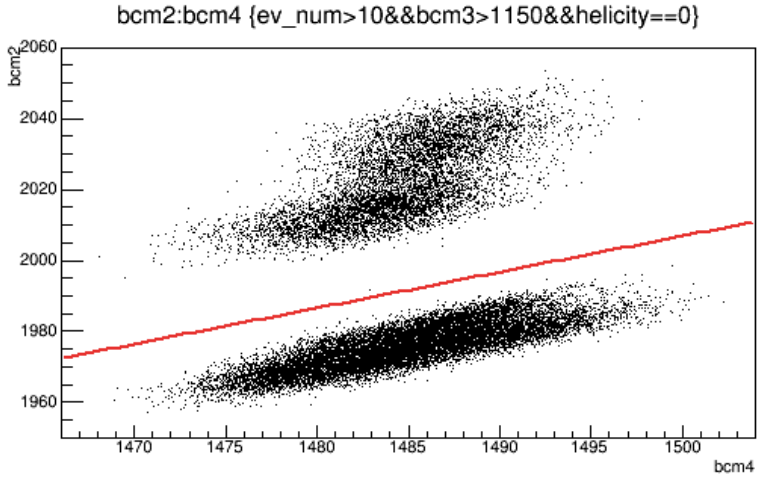
HallClaser_Oct11_9pm_Run2658_5uA_digitalreciever_currentVStime2

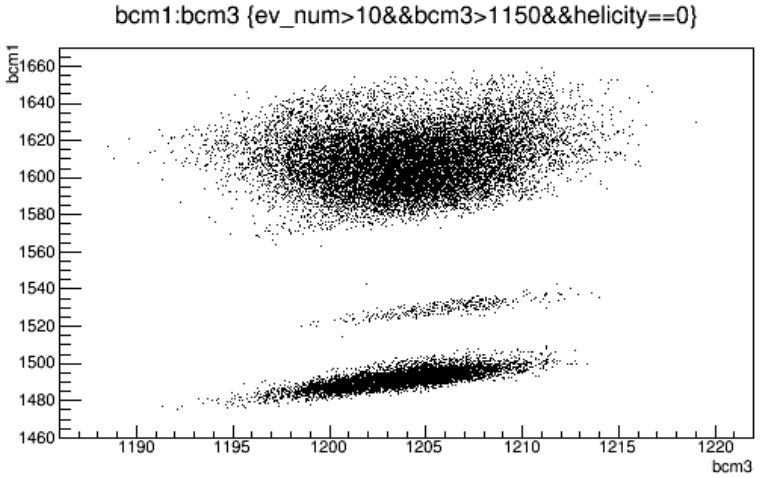


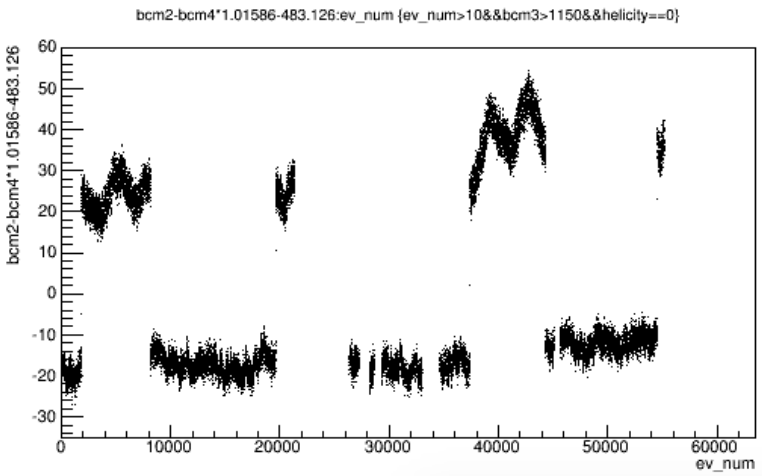


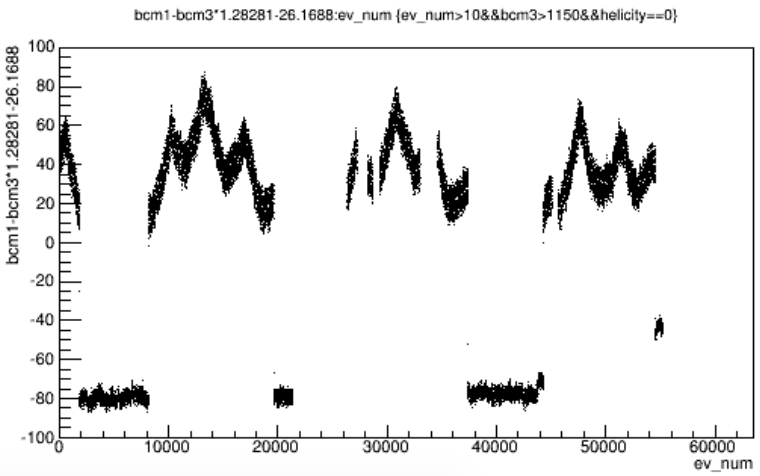
Analog didn’t see DC shifts when digital did

HallClaser_Oct11_9pm_Run2658_5uA_analogVSdigital_DCshifts



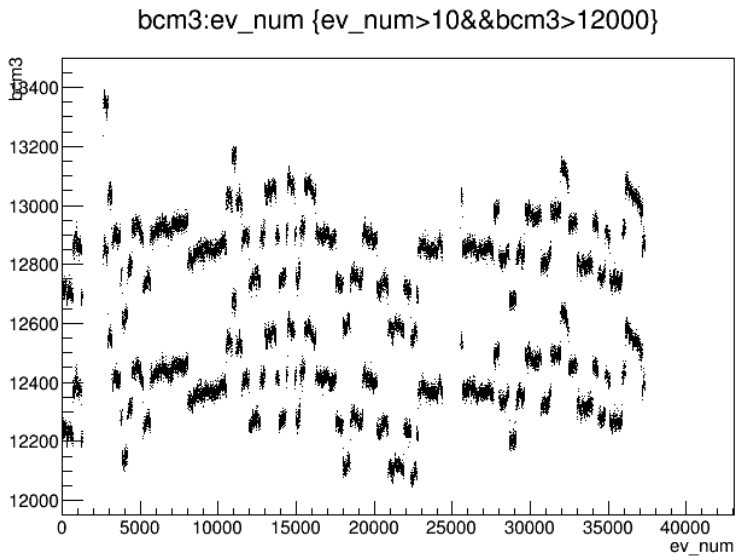






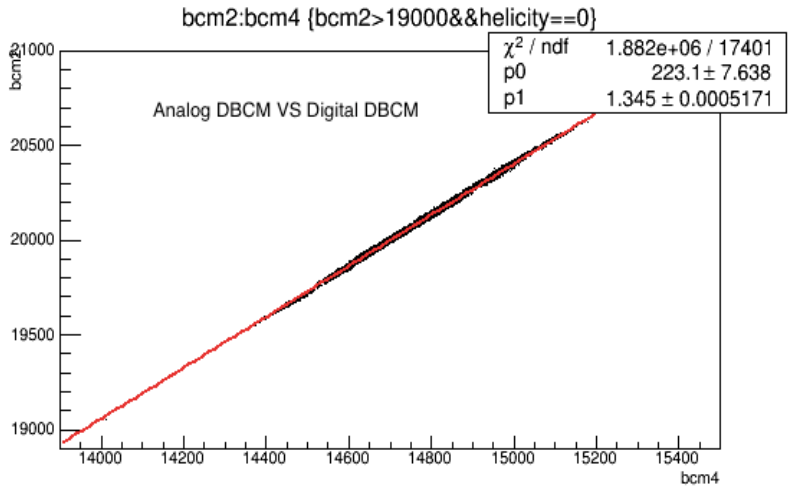
After master phase issues ID's and fixed– no shifts

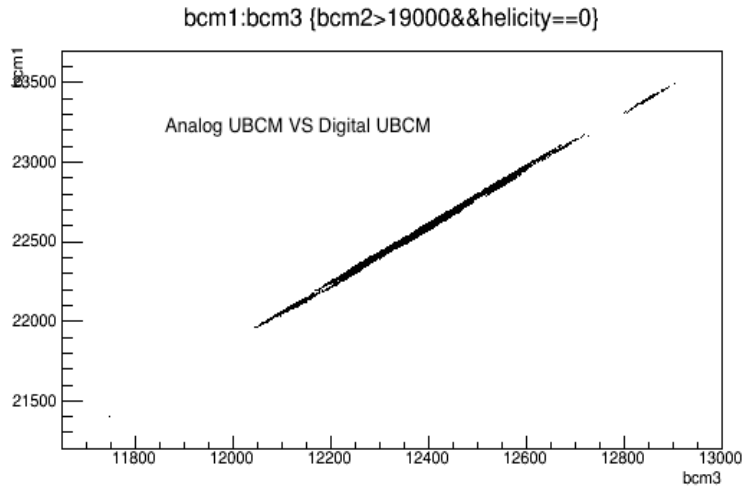
- Analog UBCM

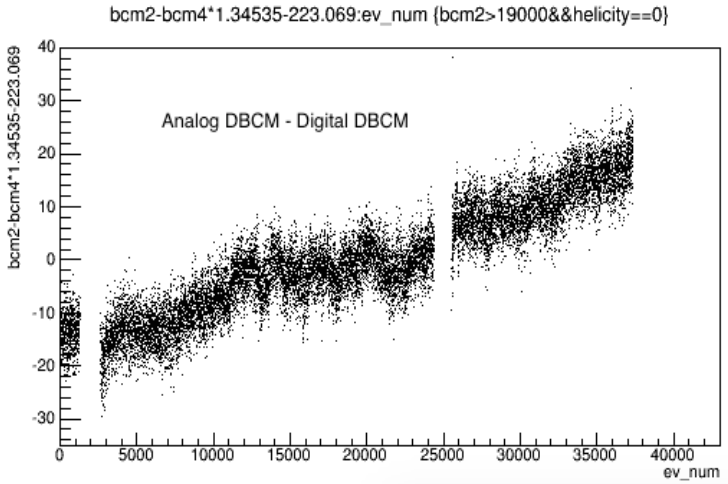


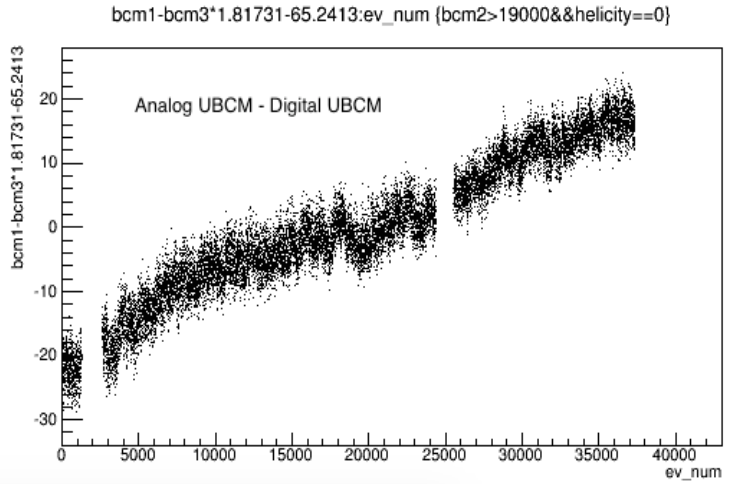
- Current is jumping
- Receivers are not

HallClaser_Oct15_11am_44uA_Run2724_analogrVSdigital_noDCshifts









PC maybe off (oct 17 4-4:30pm)

HallClaserOct17_4pm_Run2354_IHWPout_RHWP0deg_PCoffpresumably_bpm0I01autogainingnotonperhaps