

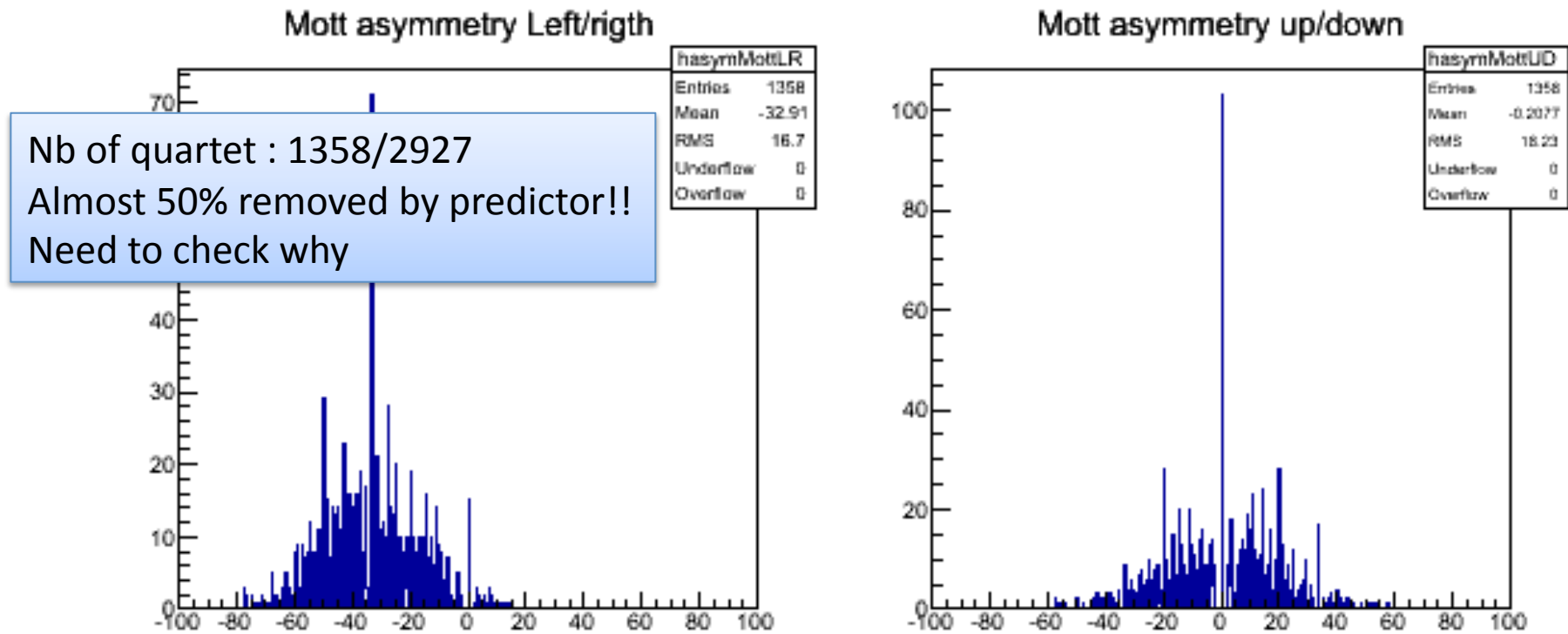
Asymmetry measurement using
the standard decoder

New in decoder

- Helicity and pattern Synch taken from ring buffer
- Shift S1 data compare to ring buffer (+1)
- Shift FADC event compare to ring buffer (+3)
- Getting asymmetries from output tree using root scripts
- Will work with any delay helicity value (need to give the delay for correct analysis, not yet in the data file)
- Asymmetries are calculated from fadc or S1 (still have pb with S2)
- Scripts to plot asymmetries are in /a/itsuser/real/scripts
 - Need new version of decoder (Erica should put it in opsmdaq as soon as possible)

Mott asymmetries (FADC)

Run 2655, trigger is Mott detector, helicity from ring buffer.



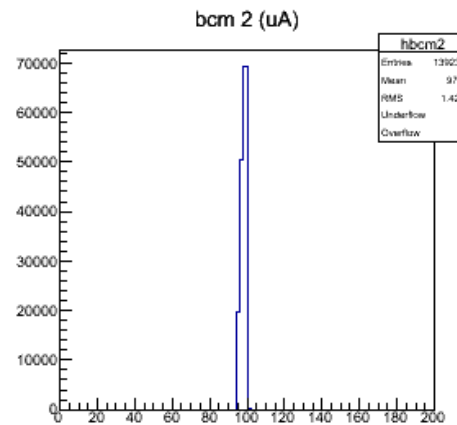
Raw $A_y = -32.9$ (compare to 34.28, see <https://cebaf.jlab.org/elog/entry/1665562>)

BCM asymmetries

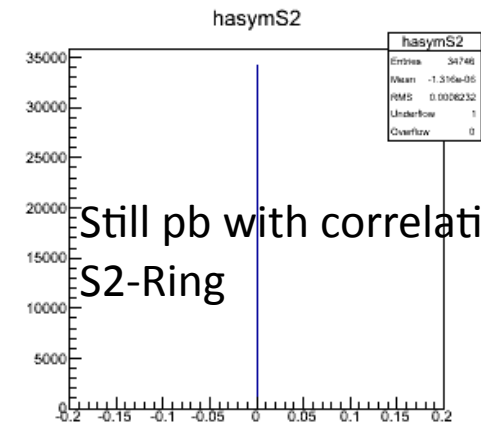
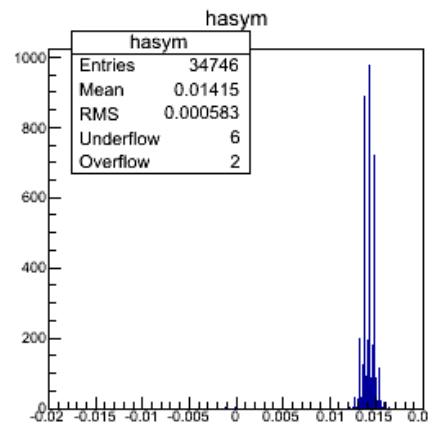
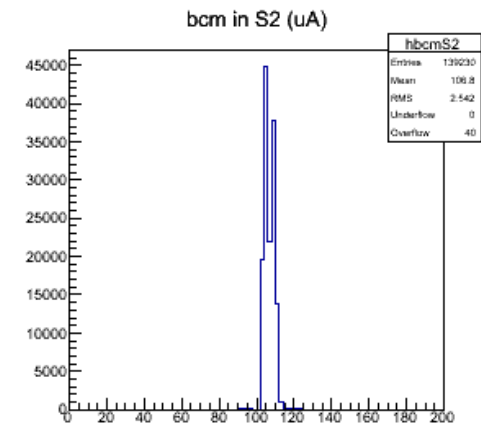
Run 2641, PITA=10000, A=15000ppm
 Nb of quartet =34746/37169
 (other rejected by predictor seems that
 We miss some pattern_synchro in ring
 buffer)

Bcm is taken from tree using s1p_ch1
 And s1m_ch1 and helicity are taken from
 HelRingCtrl

S1 + ring Hel



S2 + ring Hel

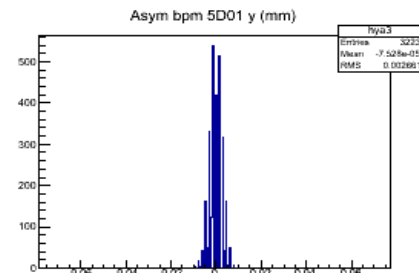
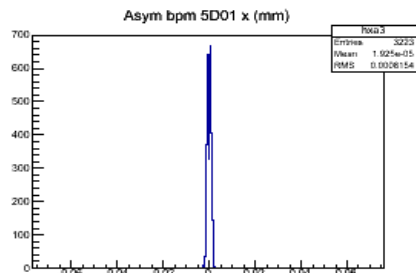
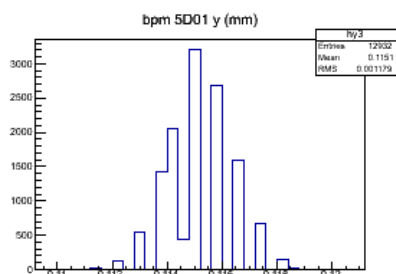
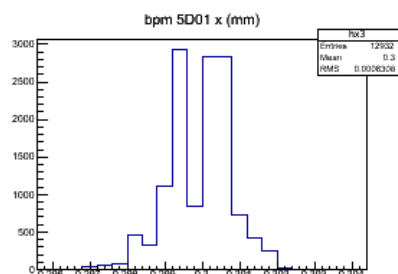
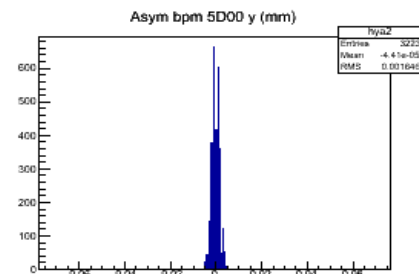
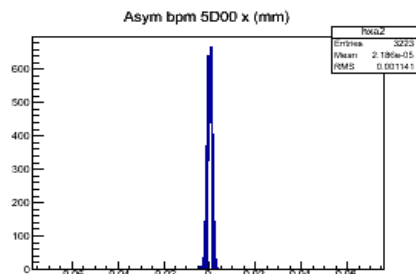
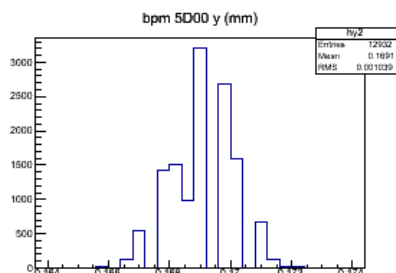
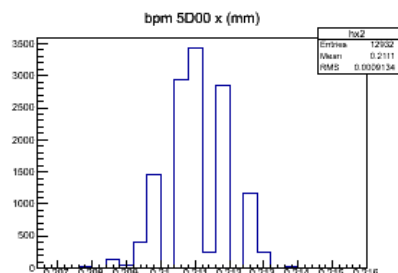
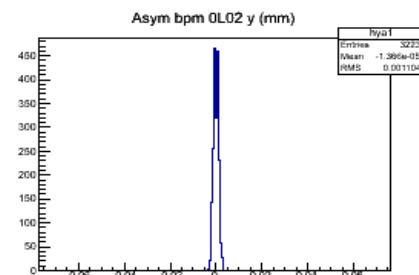
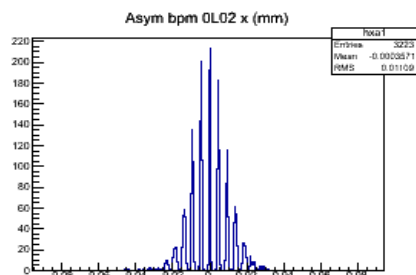
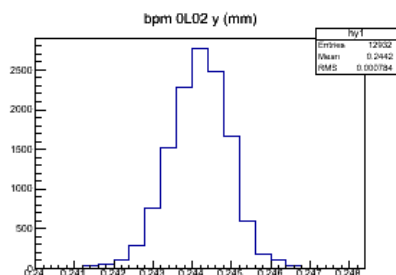
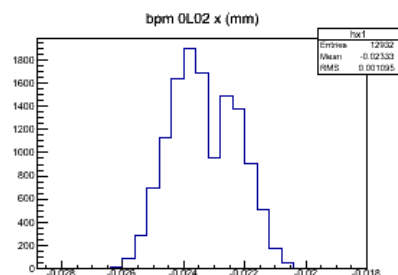
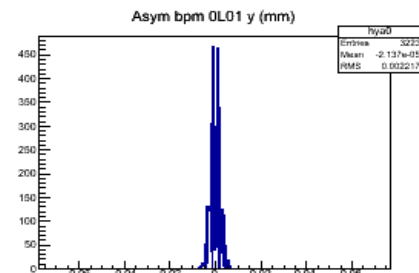
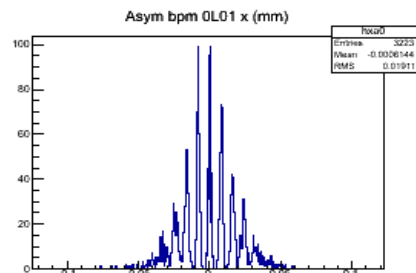
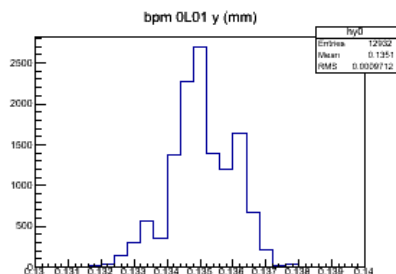
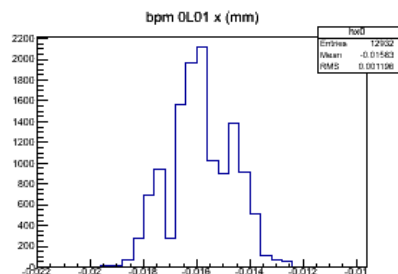


Still pb with correlation
 S2-Ring

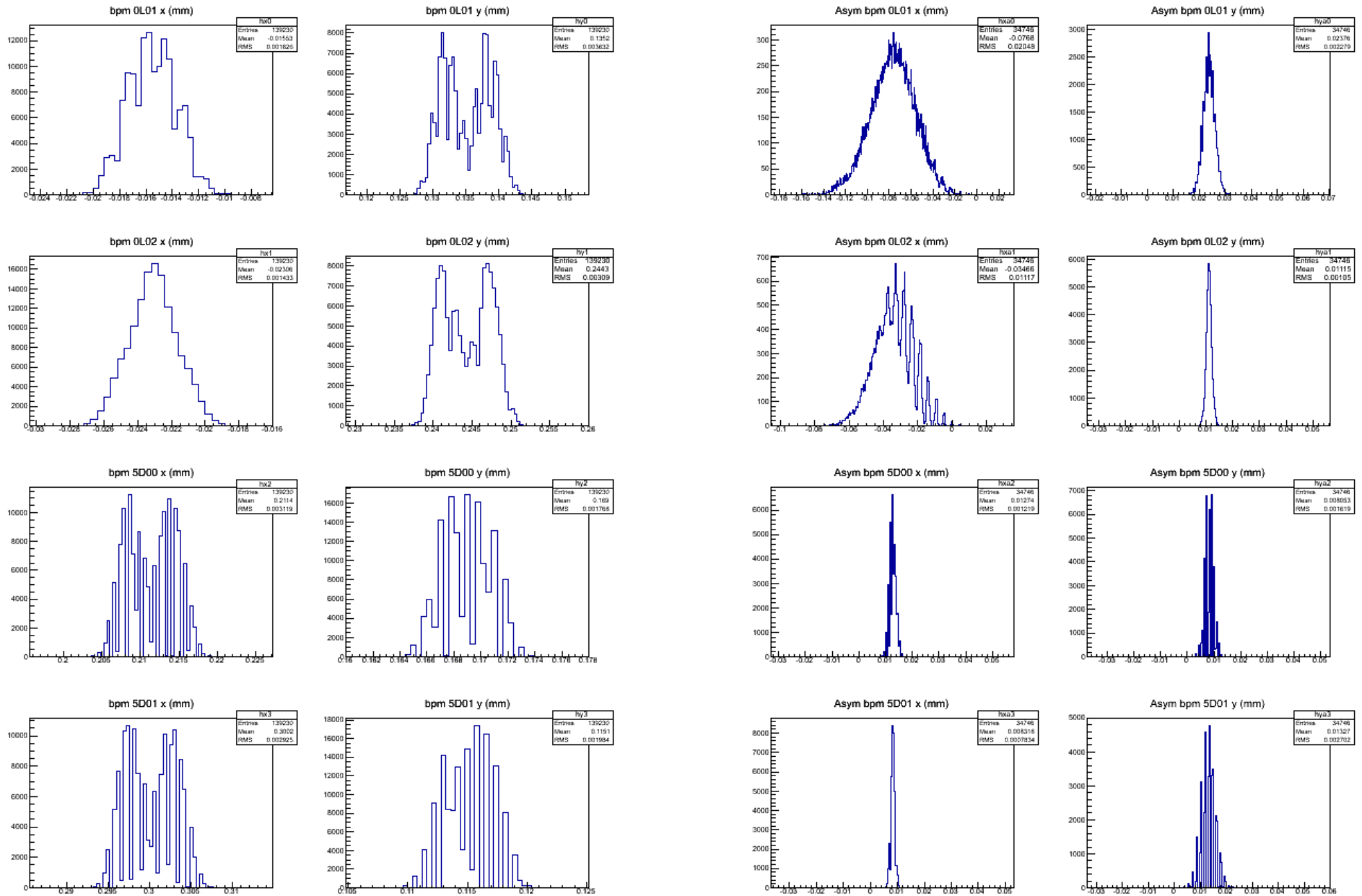
BPM

- 4 BPMs
- 0L01, 0L02 rotated
- 5D00, 5D01 not rotated
- Pedestal taken from run 2887
- Run analyzed :
- 1640 charge Asym pita=0
- 1641 charge Asym pita=10000

run 2640 pita=0



Run 1641 pita =10000



BPM

- Beam charge asymmetry induce a beam position asymmetry
- Y position shows 2 peaks in 0L01 and 0L02
- Y position shows 2 peaks when rotated in 5D00 and 5D01 but only 1 peaks when not rotated?