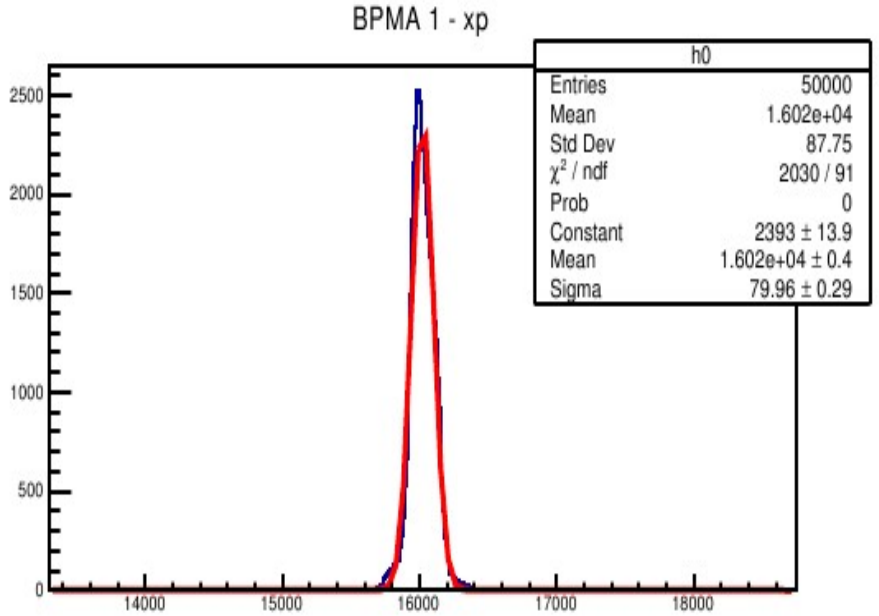
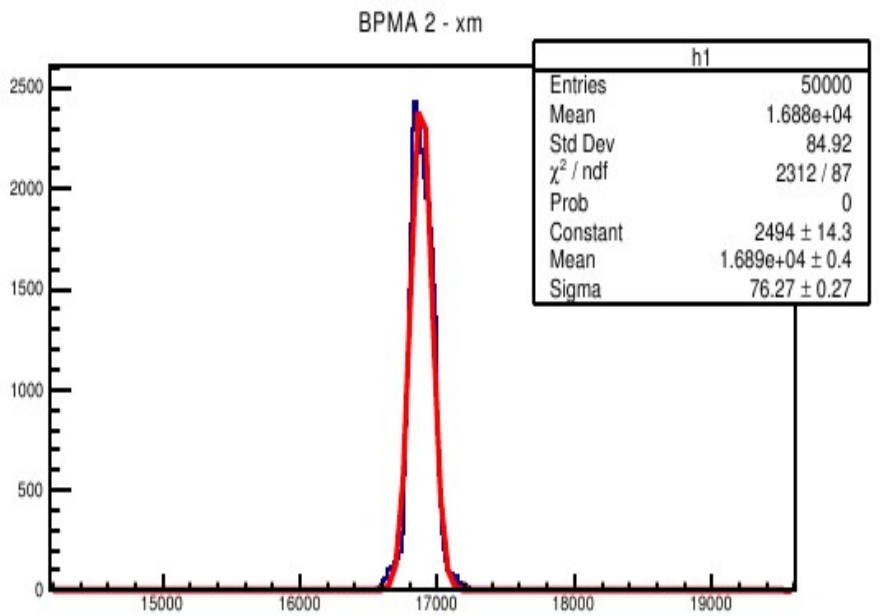
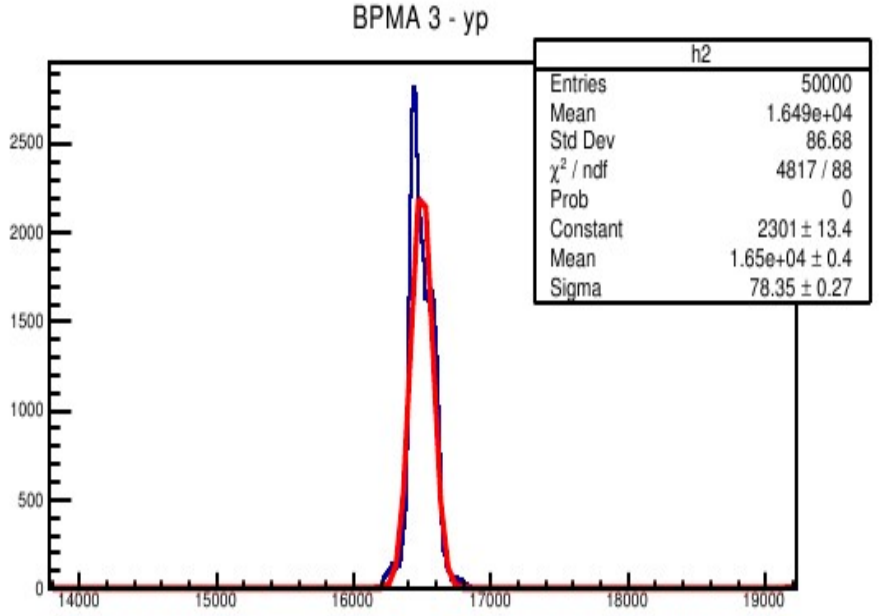
BPM calibration

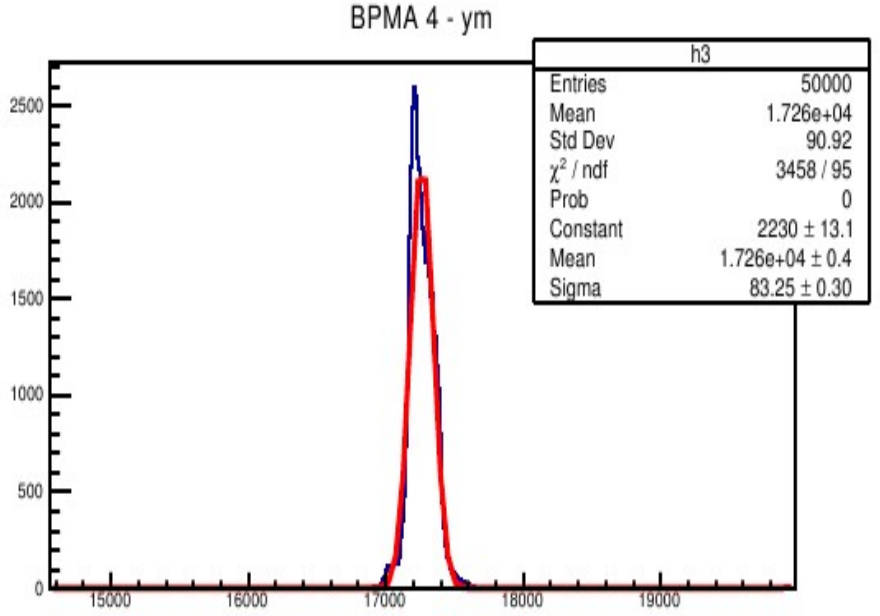
- Pedestals
  - Left arm 758
    - Fadcs
    - Fbus adcs
  - Right arm 90558
    - Fadcs
    - Fbus adcs
- Harp scans for a bulleye's scan
  - https://wiki.jlab.org/tegwiki/index.php/BPM_Calibration

– Left arm 758 fadcs

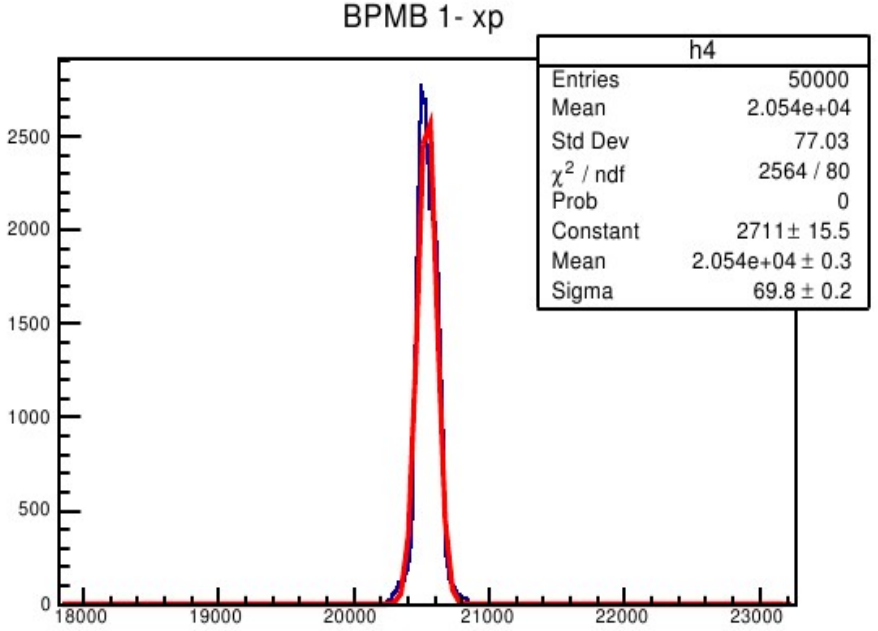


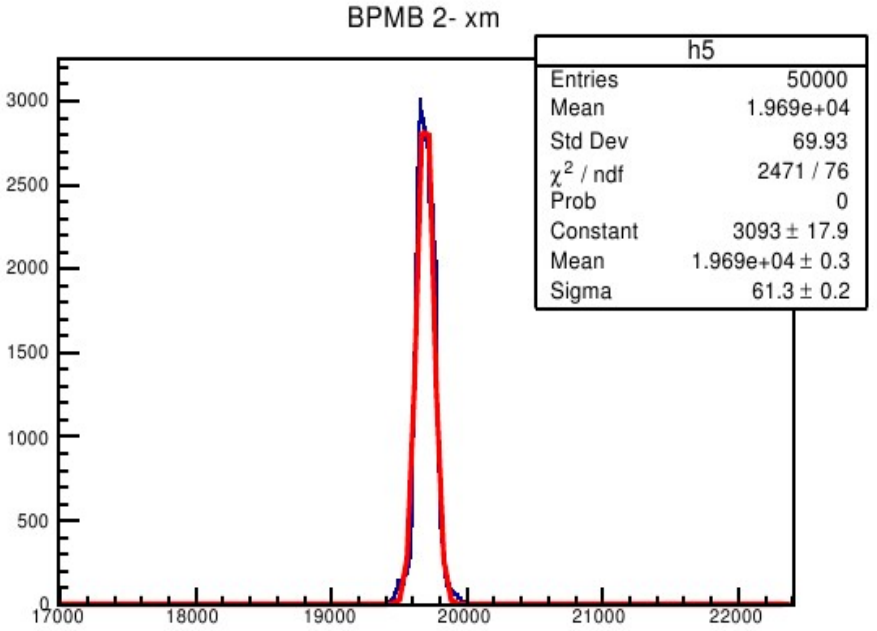


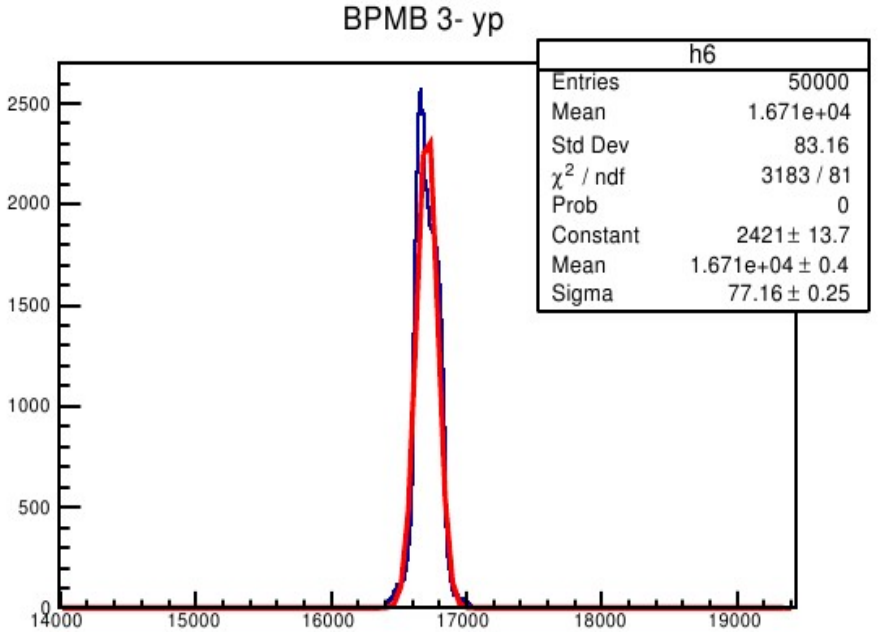


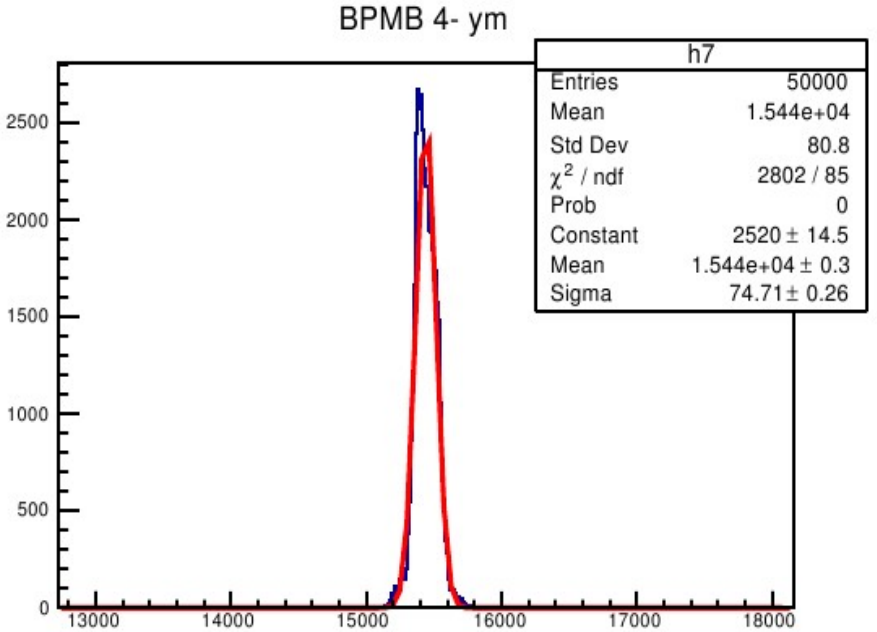


– Left arm 758 fadcs

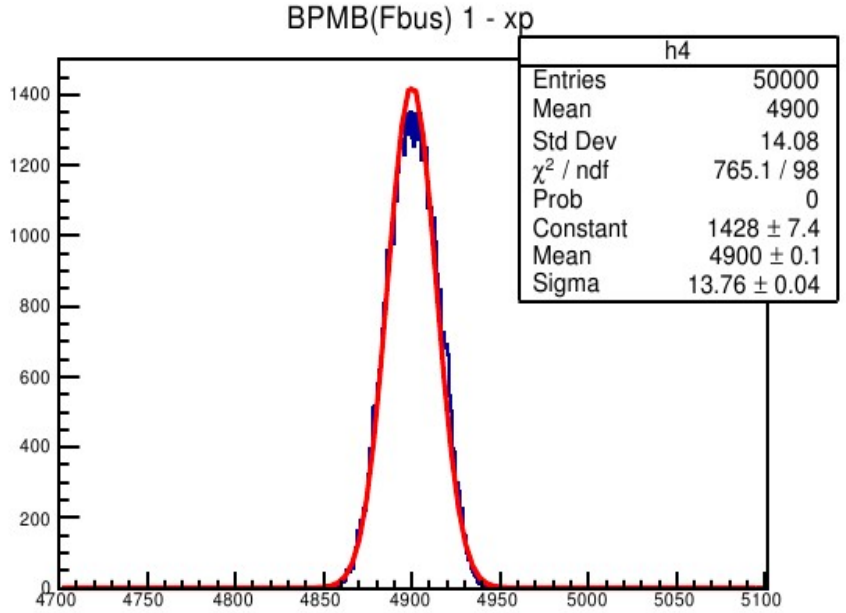


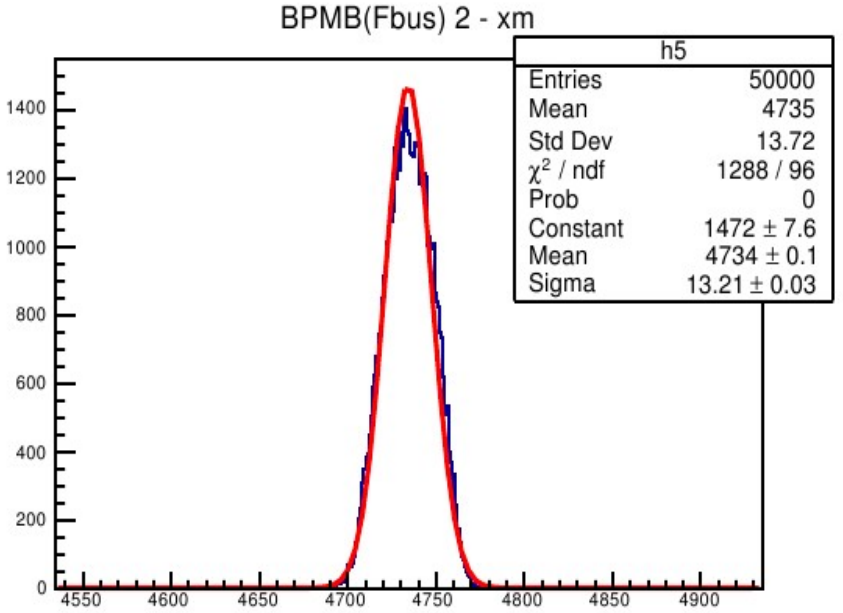


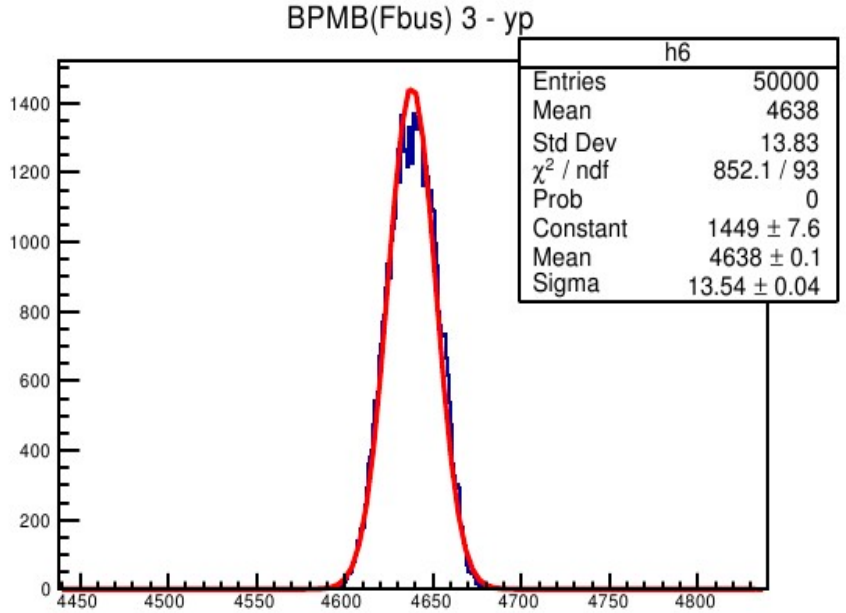


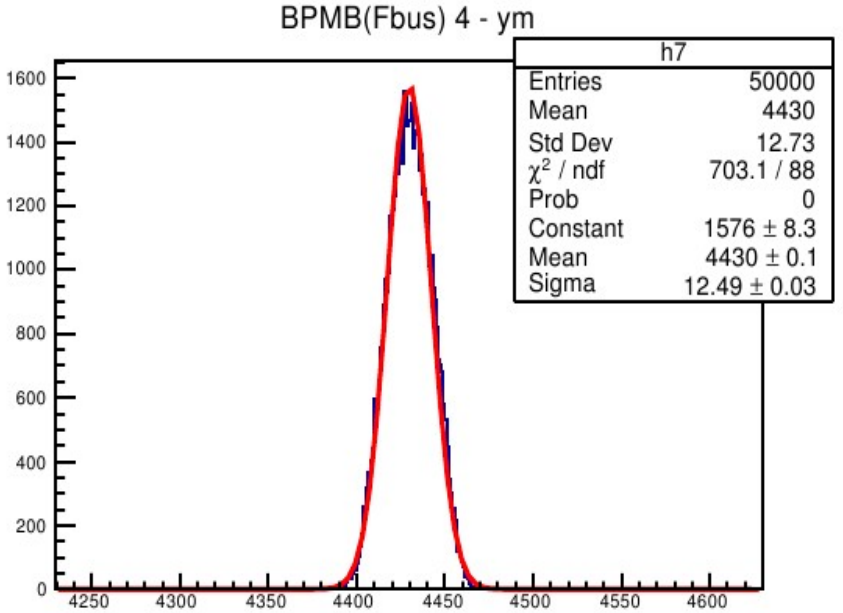


– Left arm 758

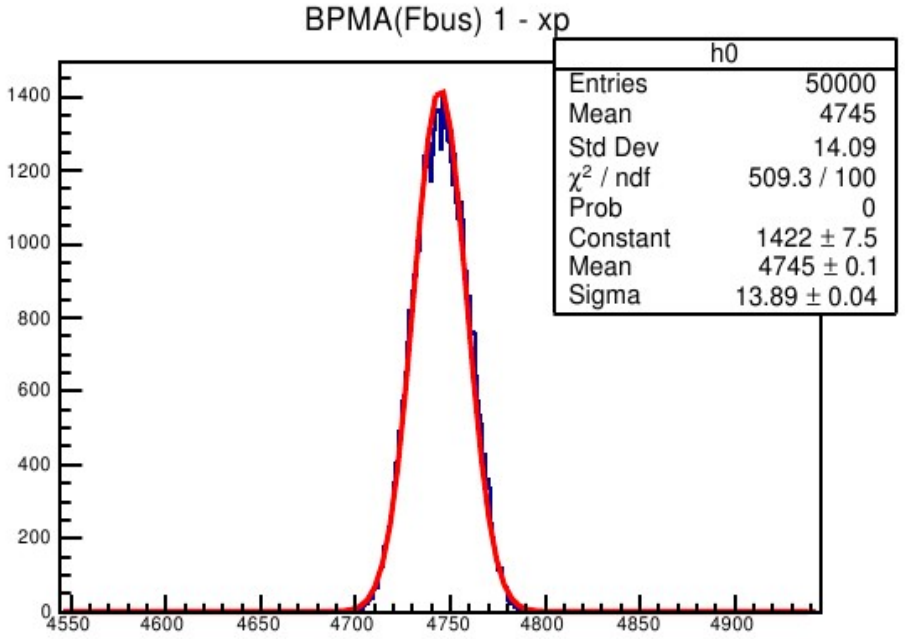

BPMB(Fbus) 1 - xp
h4
Entries 50000
Mean 4900
Std Dev 14.08
χ² / ndf 765.1 / 98
Prob 0
Constant 1428 ± 7.4
Mean 4900 ± 0.1
Sigma 13.76 ± 0.04

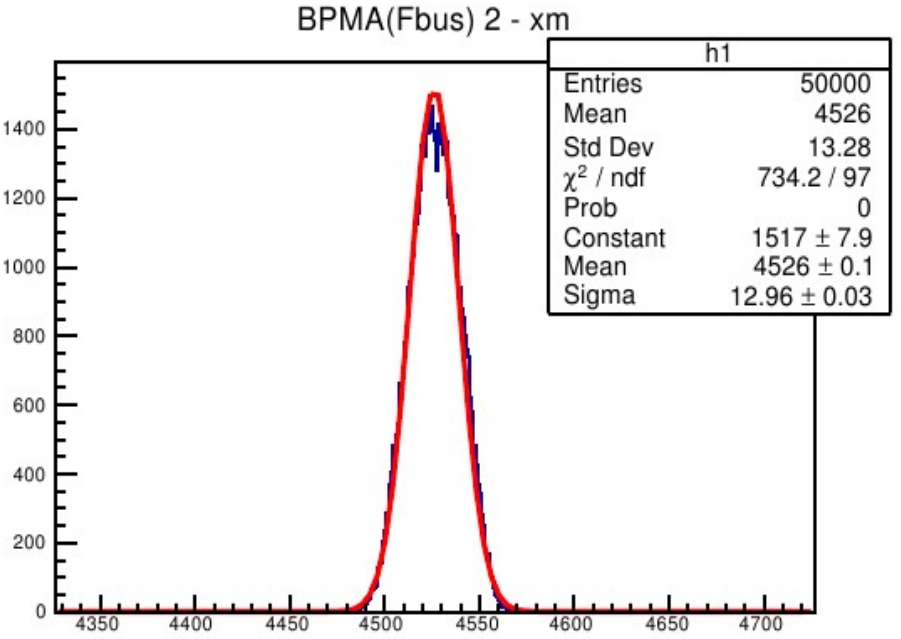

BPMB(Fbus) 2 - xm
h5
Entries 50000
Mean 4735
Std Dev 13.72
χ² / ndf 1288 / 96
Prob 0
Constant 1472 ± 7.6
Mean 4734 ± 0.1
Sigma 13.21 ± 0.03

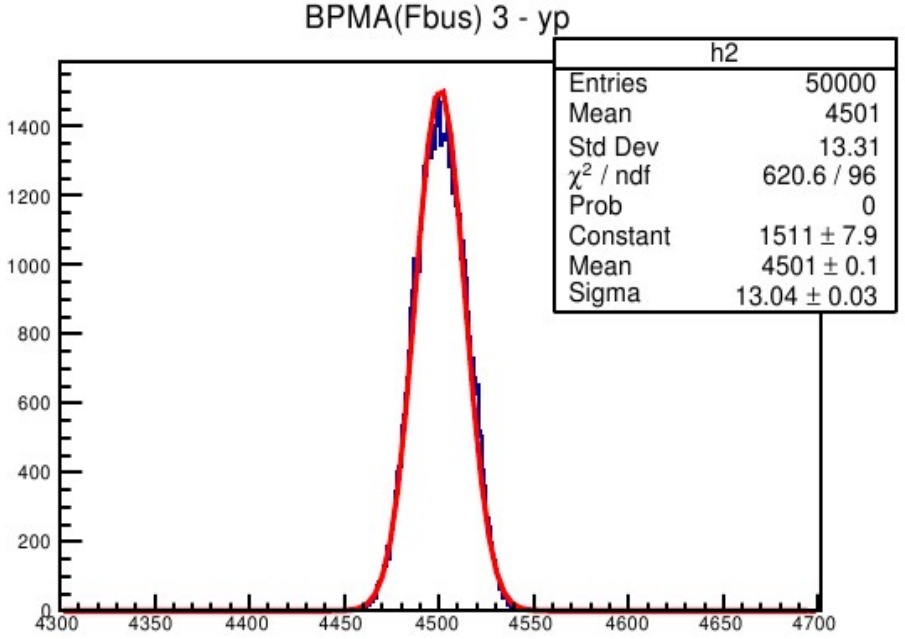

BPMB(Fbus) 3 - yp
h6
Entries 50000
Mean 4638
Std Dev 13.83
χ² / ndf 852.1 / 93
Prob 0
Constant 1449 ± 7.6
Mean 4638 ± 0.1
Sigma 13.54 ± 0.04

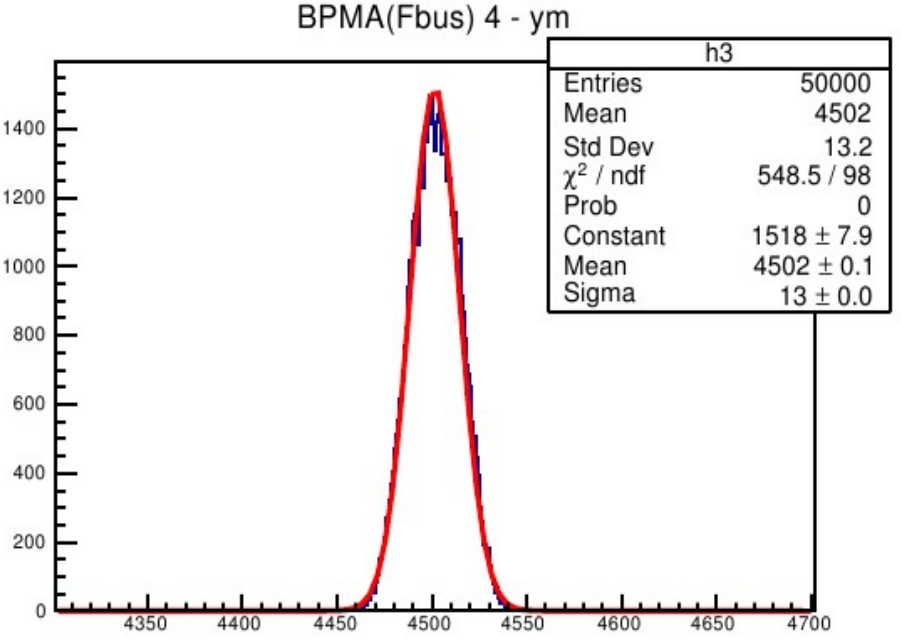

BPMB(Fbus) 4 - ym
h7
Entries 50000
Mean 4430
Std Dev 12.73
χ² / ndf 703.1 / 88
Prob 0
Constant 1576 ± 8.3
Mean 4430 ± 0.1
Sigma 12.49 ± 0.03

– Left arm 758

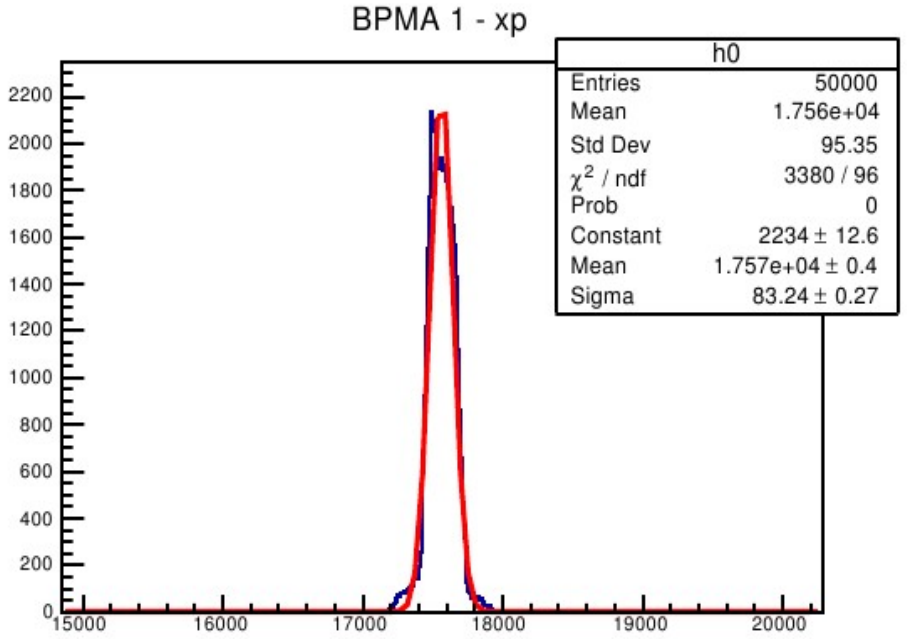

BPMA(Fbus) 1 - xp
h0
Entries 50000
Mean 4745
Std Dev 14.09
χ² / ndf 509.3 / 100
Prob 0
Constant 1422 ± 7.5
Mean 4745 ± 0.1
Sigma 13.89 ± 0.04

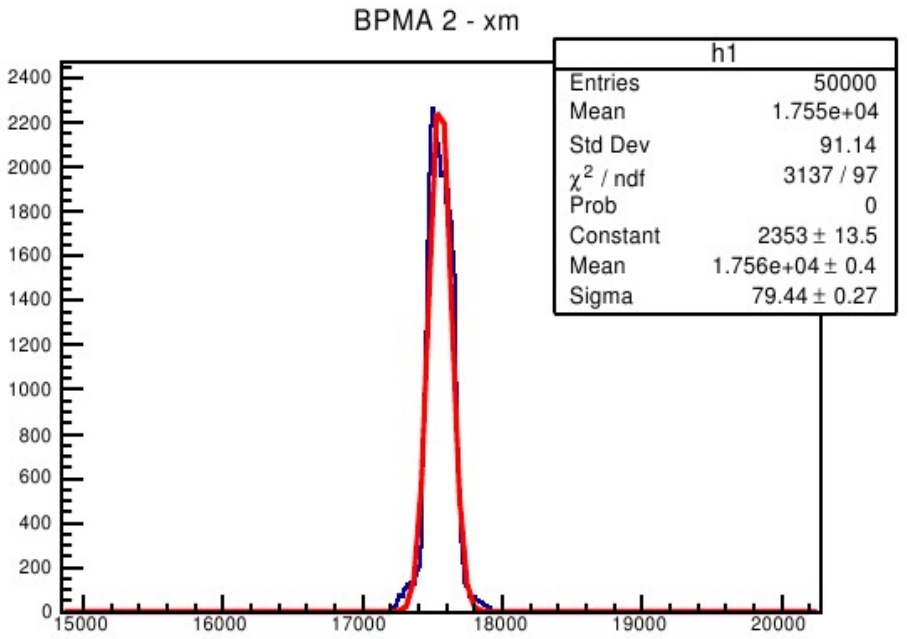

BPMA(Fbus) 2 - xm
h1
Entries 50000
Mean 4526
Std Dev 13.28
χ² / ndf 734.2 / 97
Prob 0
Constant 1517 ± 7.9
Mean 4526 ± 0.1
Sigma 12.96 ± 0.03

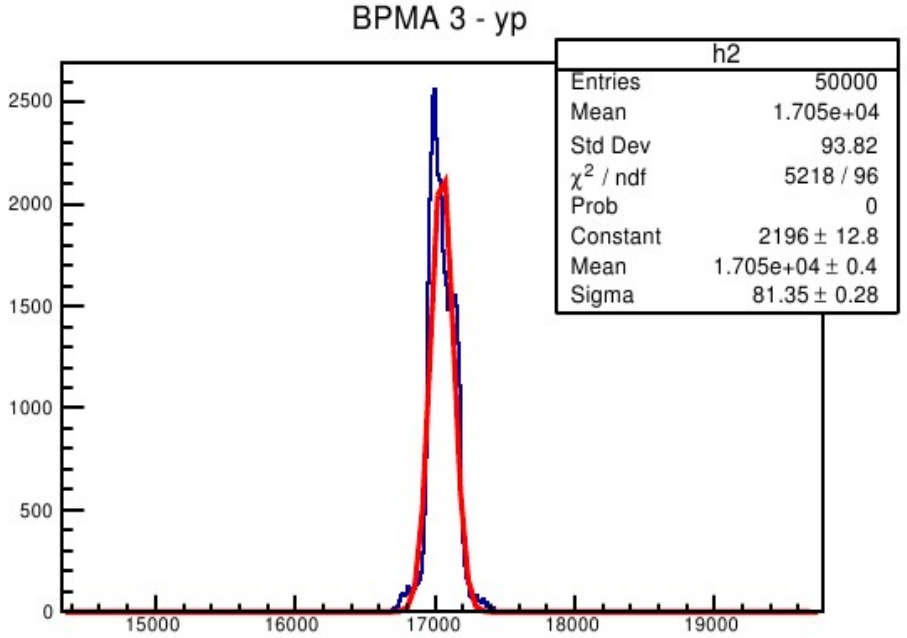

BPMA(Fbus) 3 - yp
h2
Entries 50000
Mean 4501
Std Dev 13.31
χ² / ndf 620.6 / 96
Prob 0
Constant 1511 ± 7.9
Mean 4501 ± 0.1
Sigma 13.04 ± 0.03

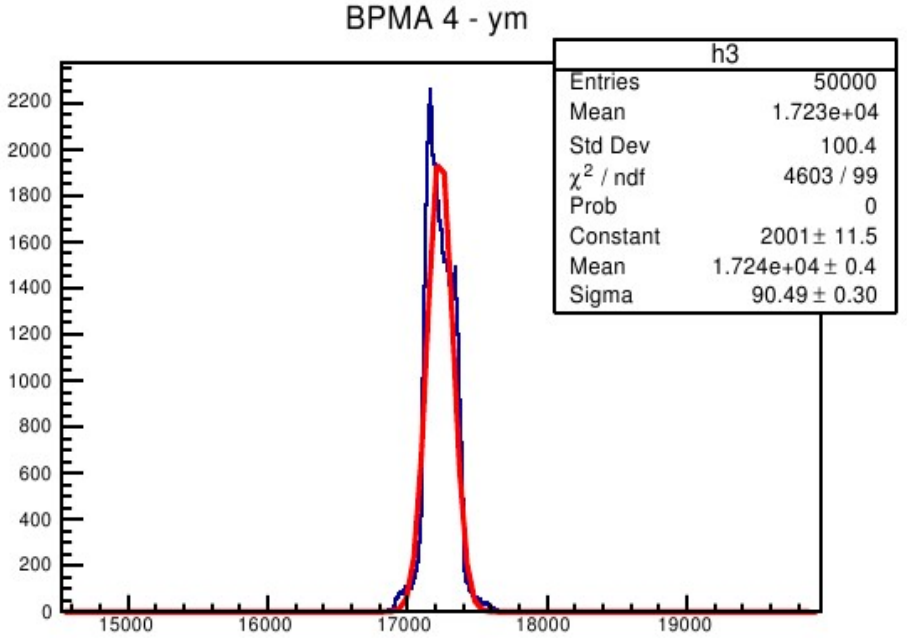

BPMA(Fbus) 4 - ym
h3
Entries 50000
Mean 4502
Std Dev 13.2
χ² / ndf 548.5 / 98
Prob 0
Constant 1518 ± 7.9
Mean 4502 ± 0.1
Sigma 13 ± 0.0

– Right arm 90558

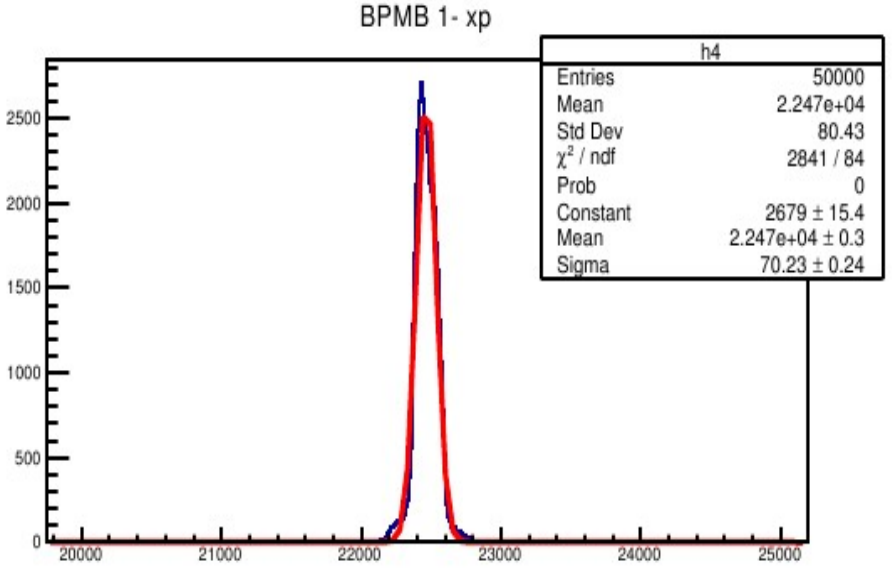


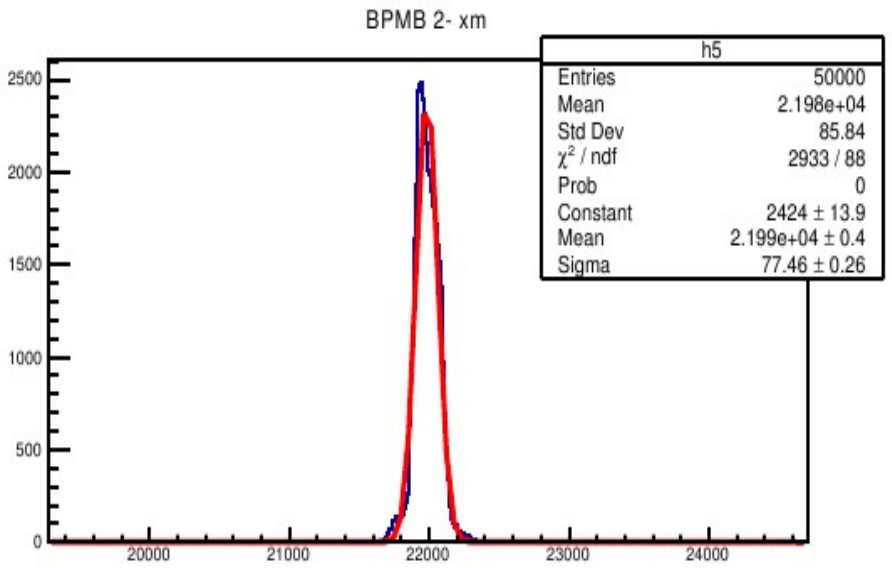


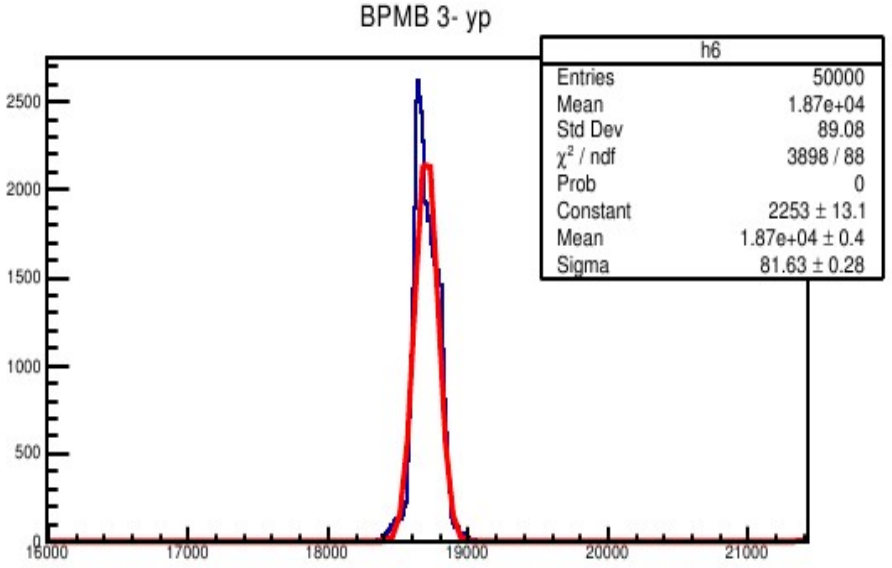


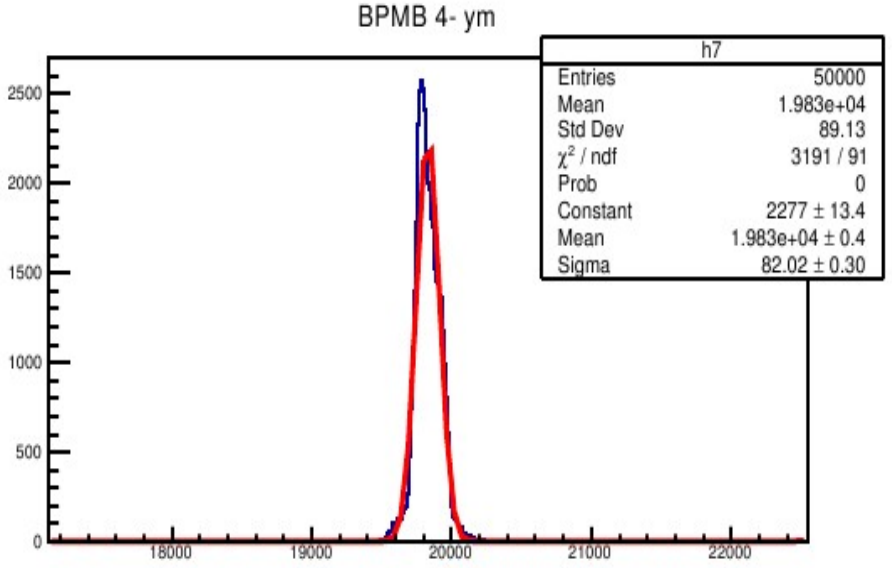


– Right arm 90558

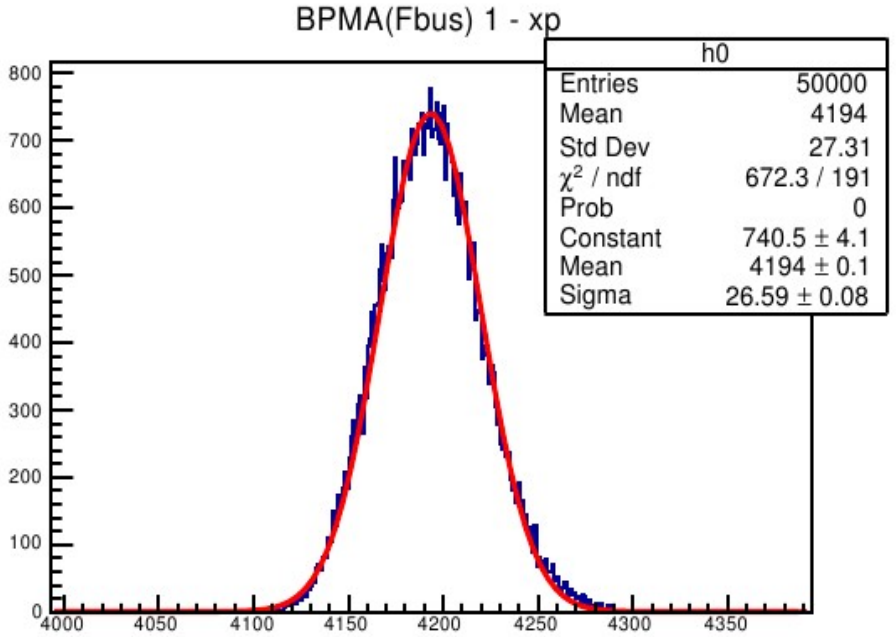


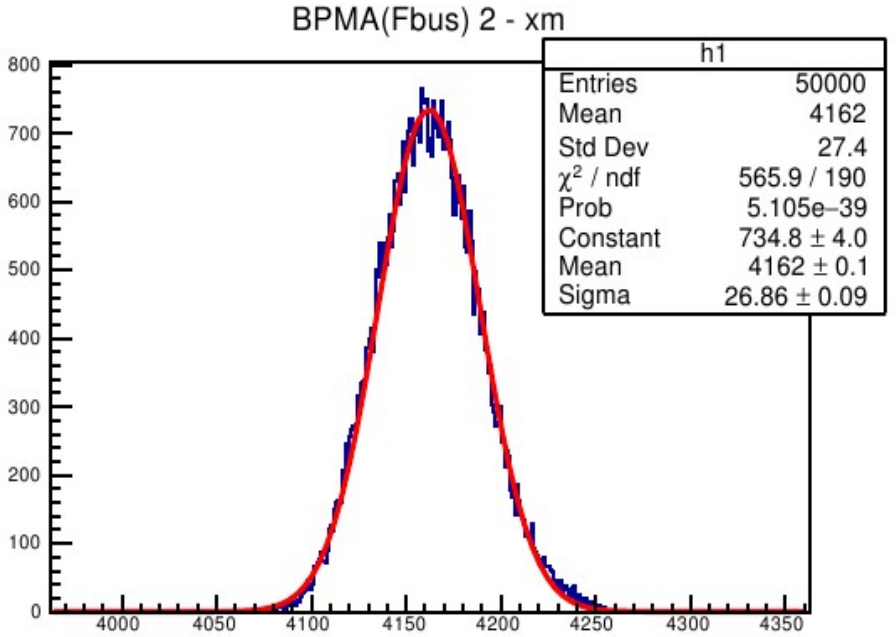


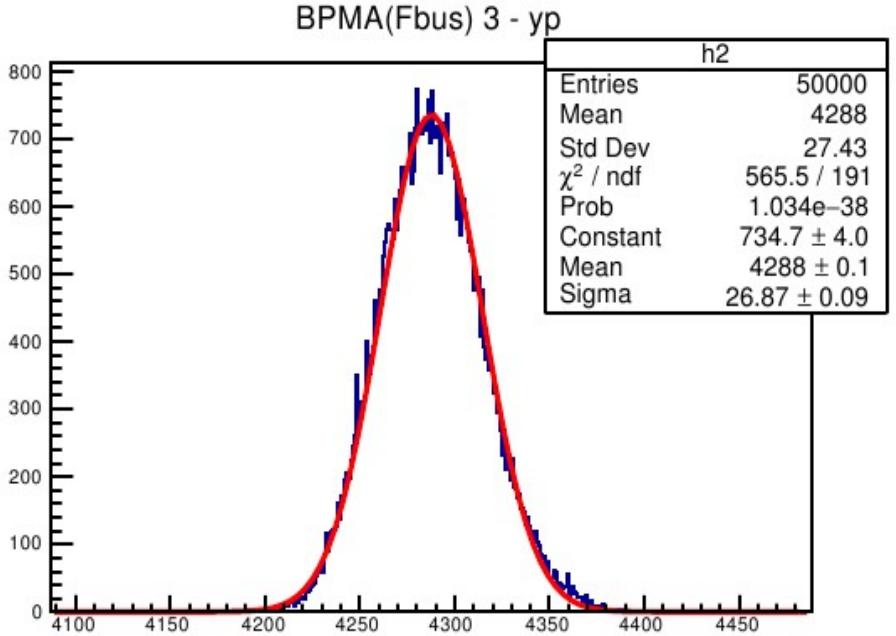


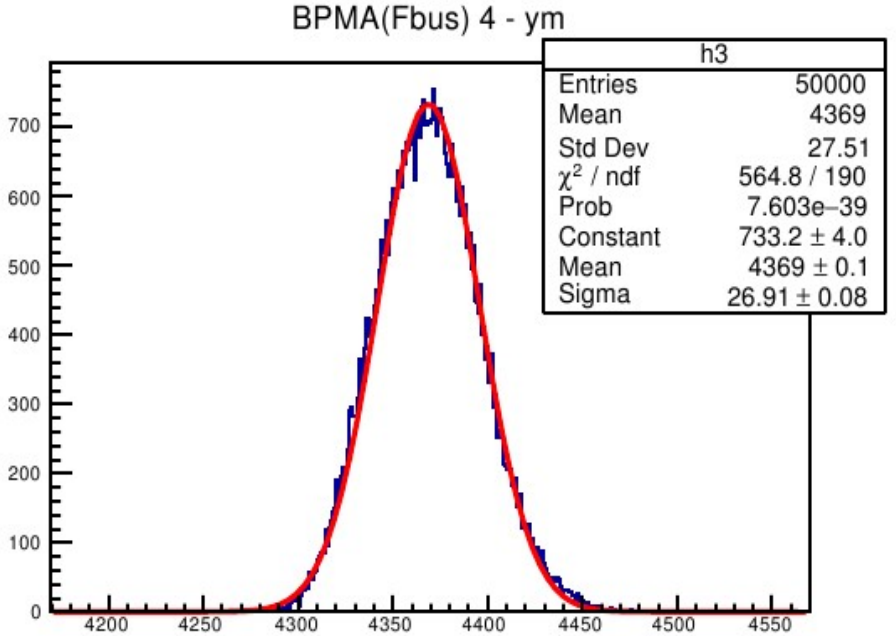


– Right arm 90558

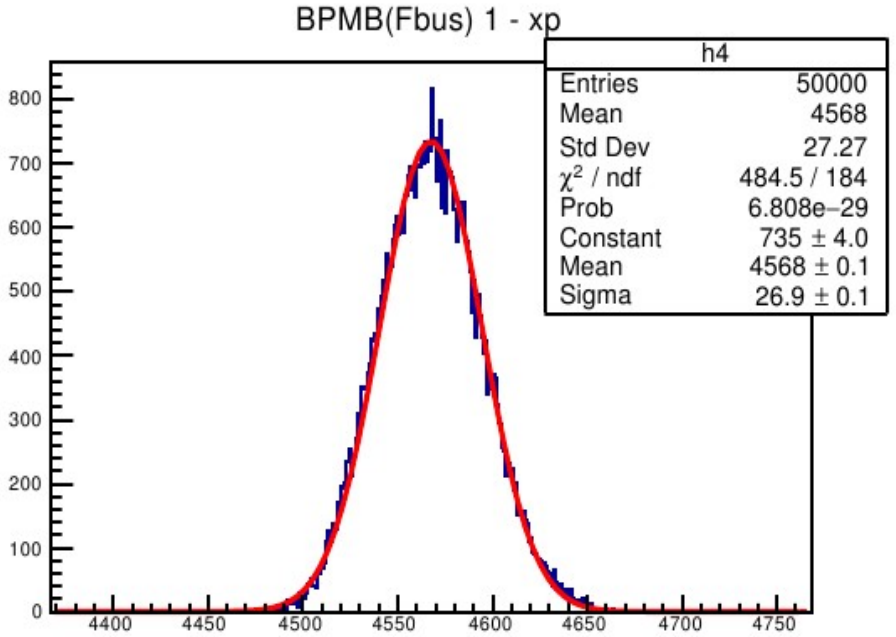


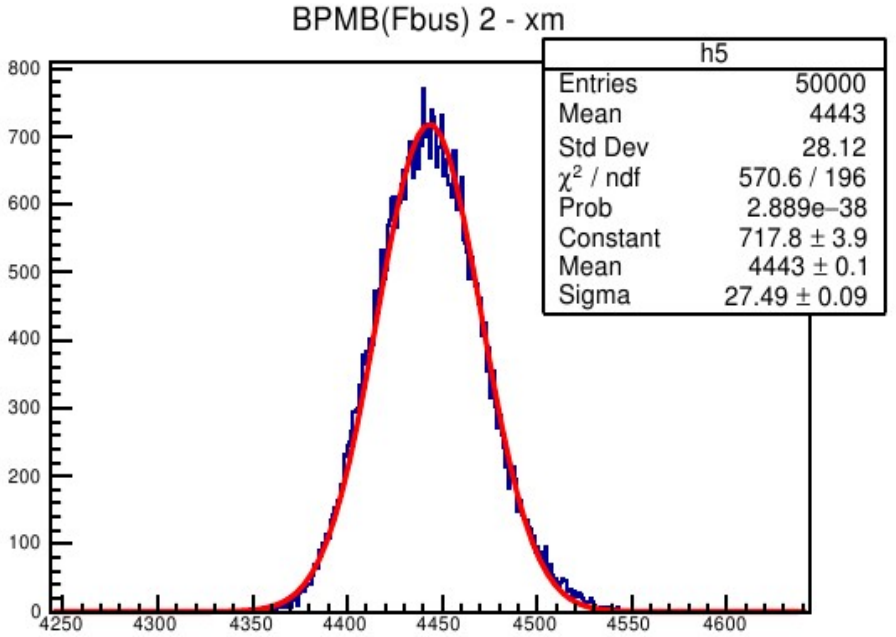


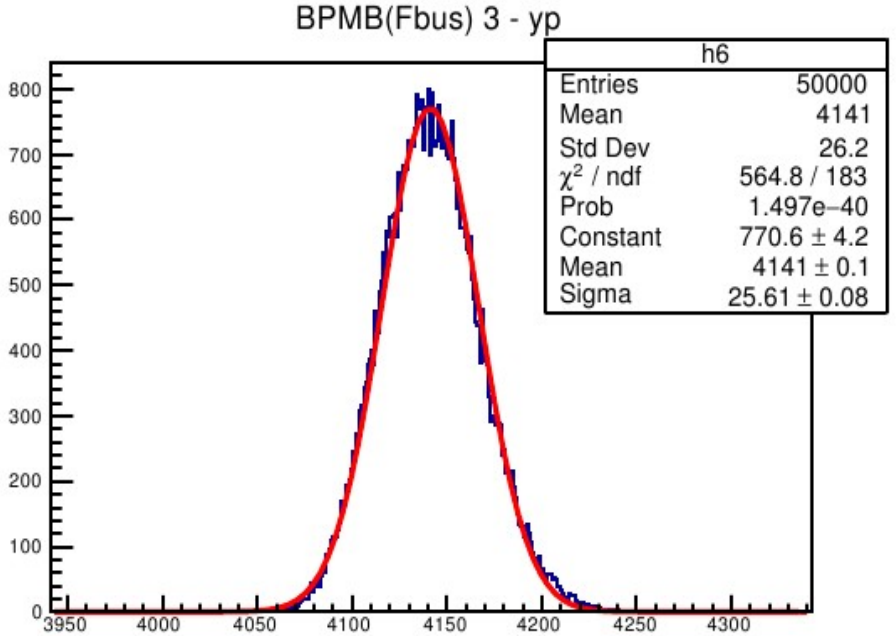


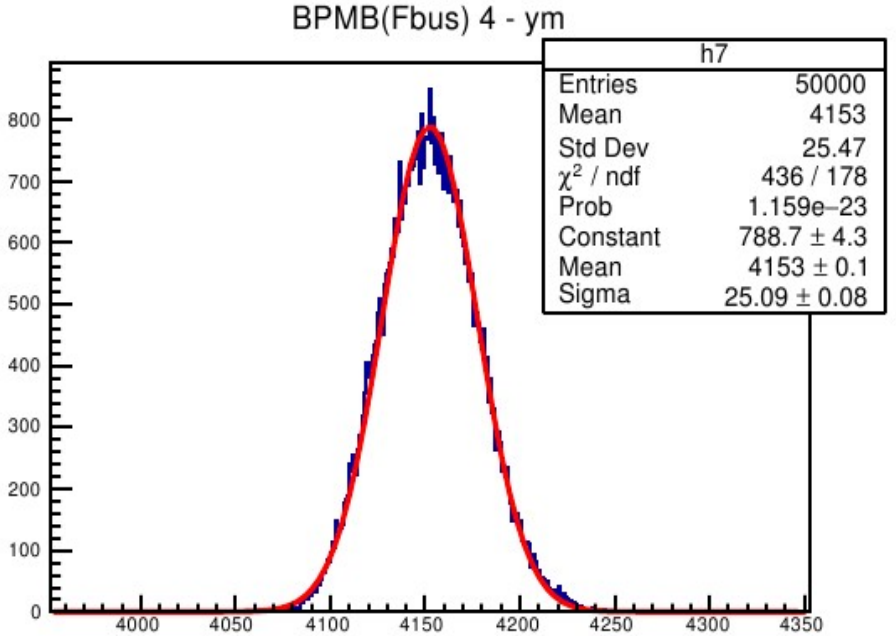


– Right arm 90558





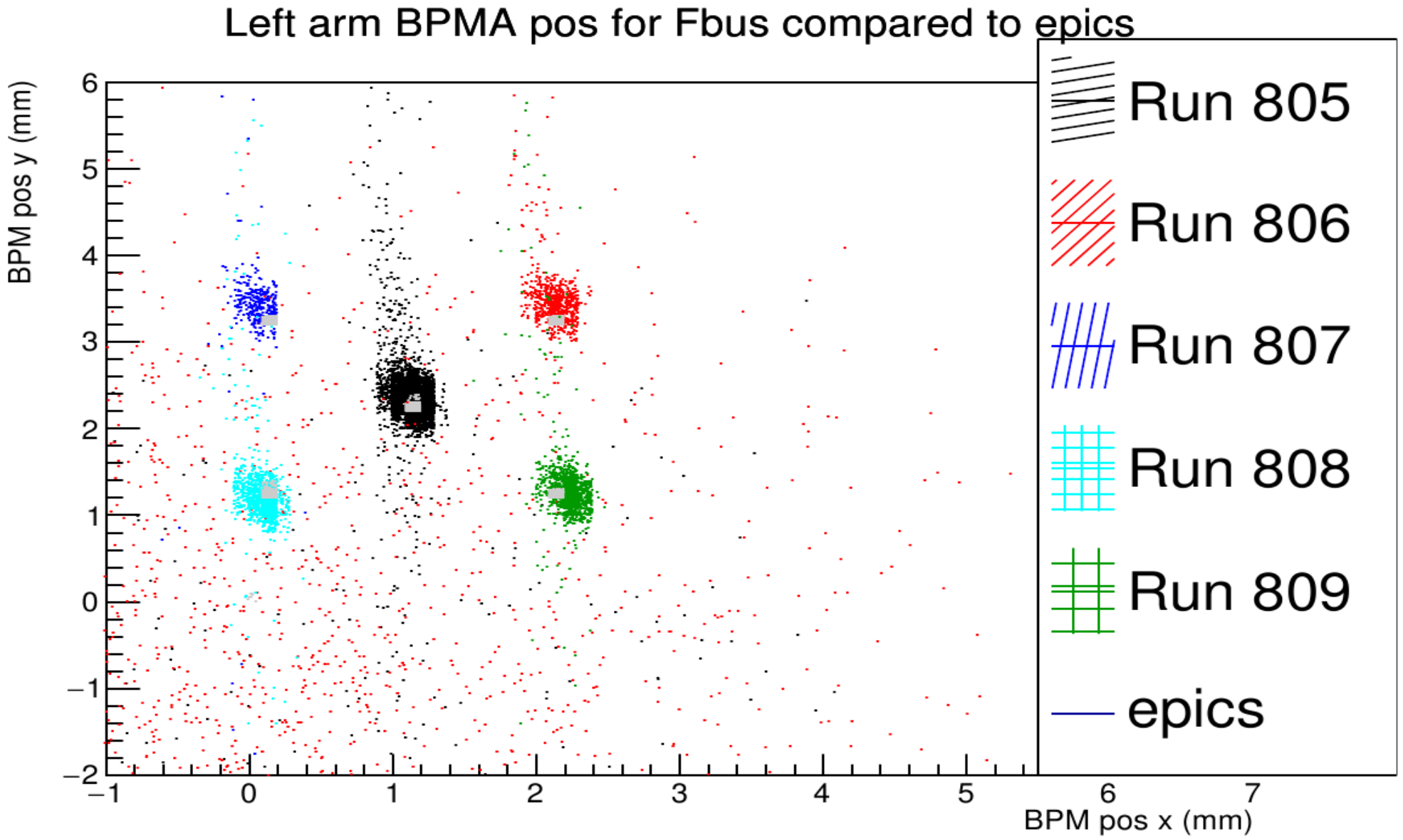




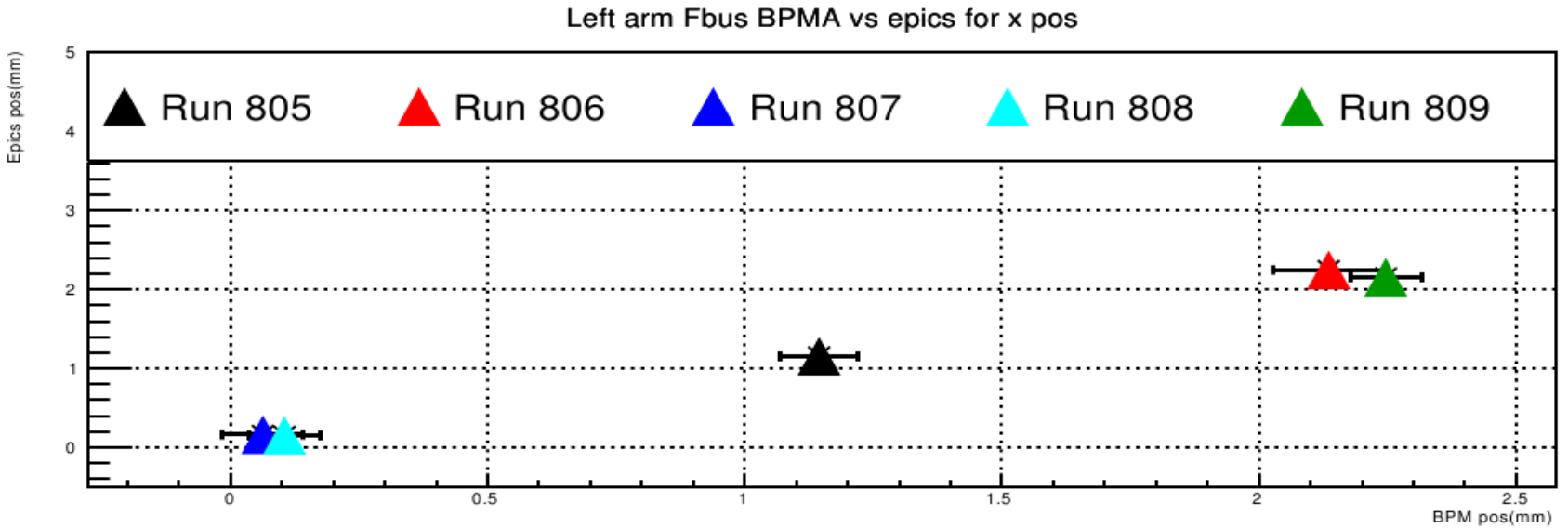
Calibration results

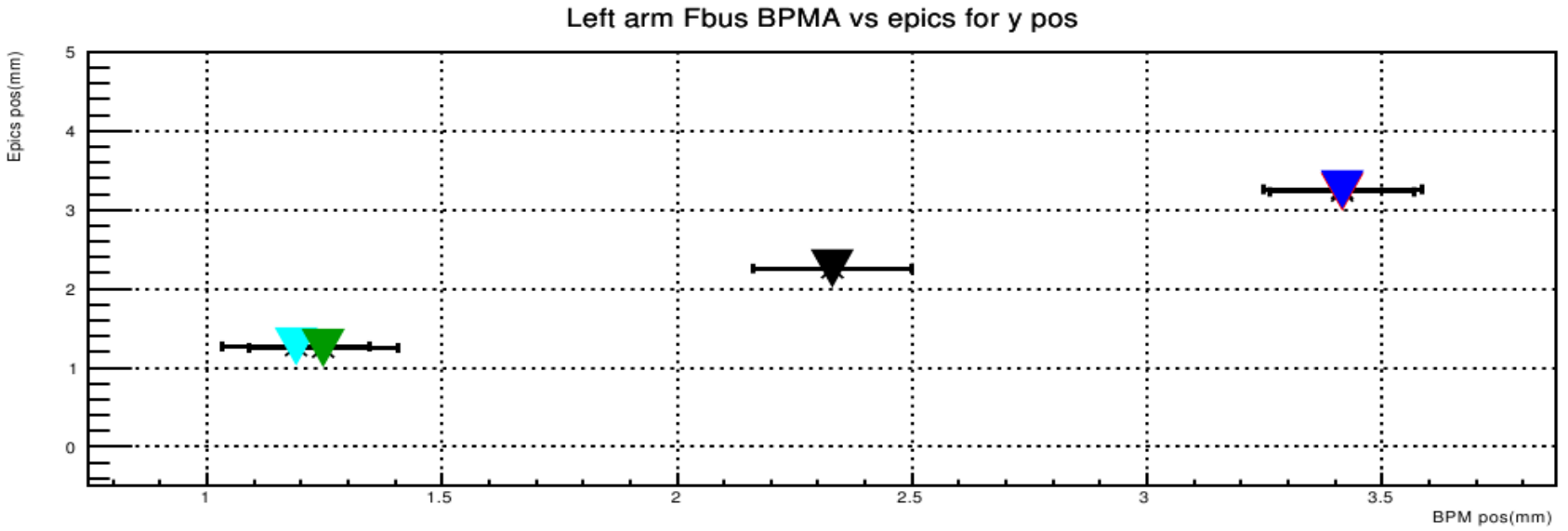
- 2D Plot of the x and y positions reconstructed from the Bpm signals with a Grey box of the values we expect.
- A graph of the fitted x and y position compared to their epics reference.
- This is completed for each BPM of each arm for both fadc and Fast bus.

Calibration for Left Arm

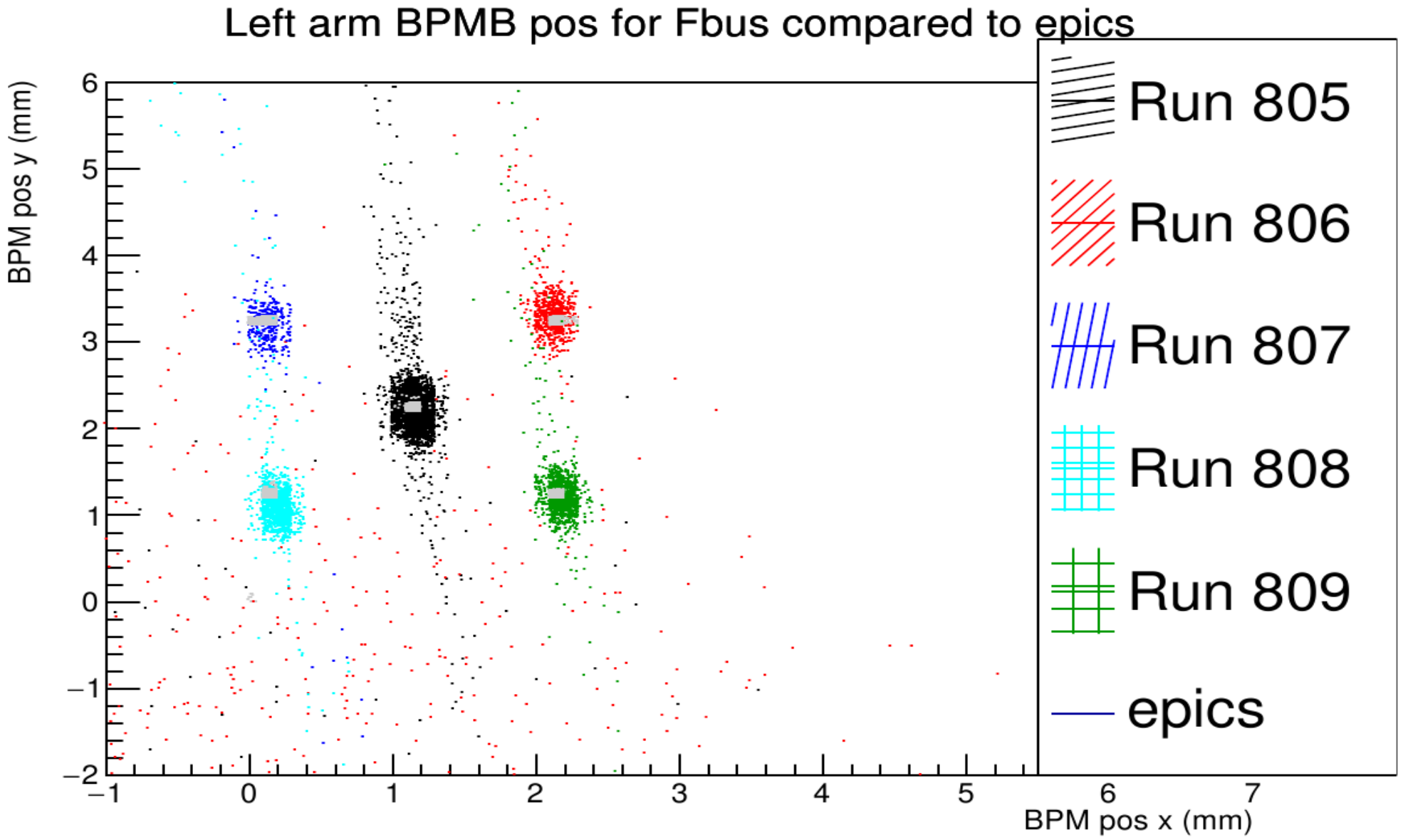


Calibration for Left Arm

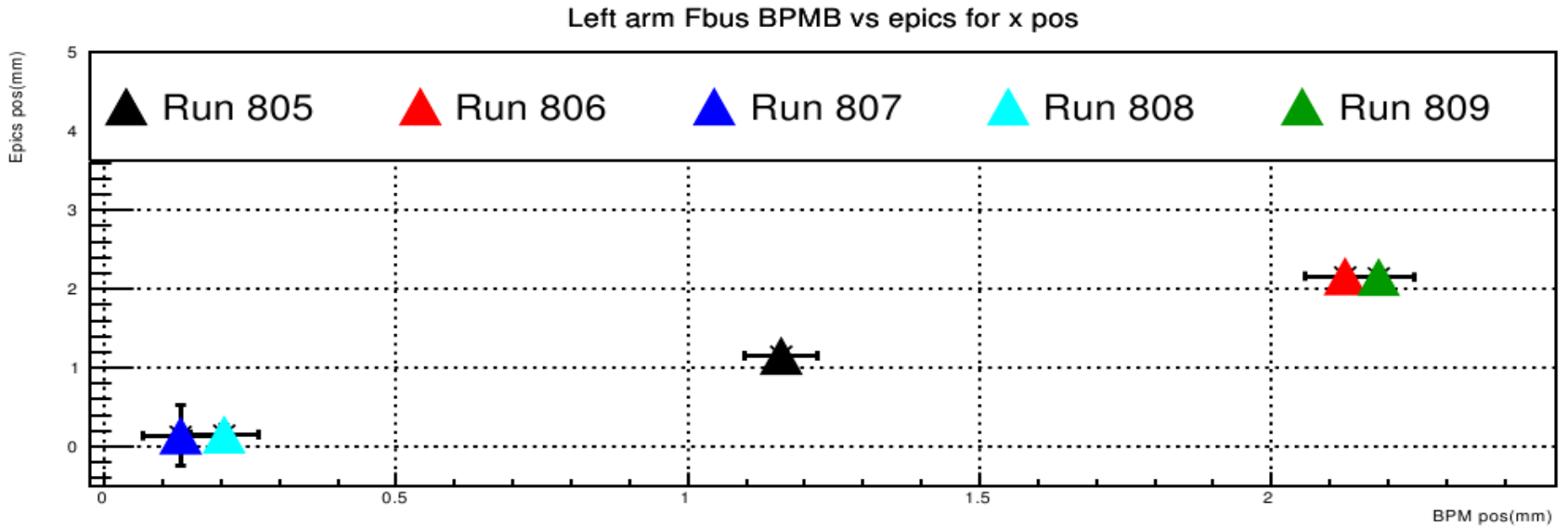


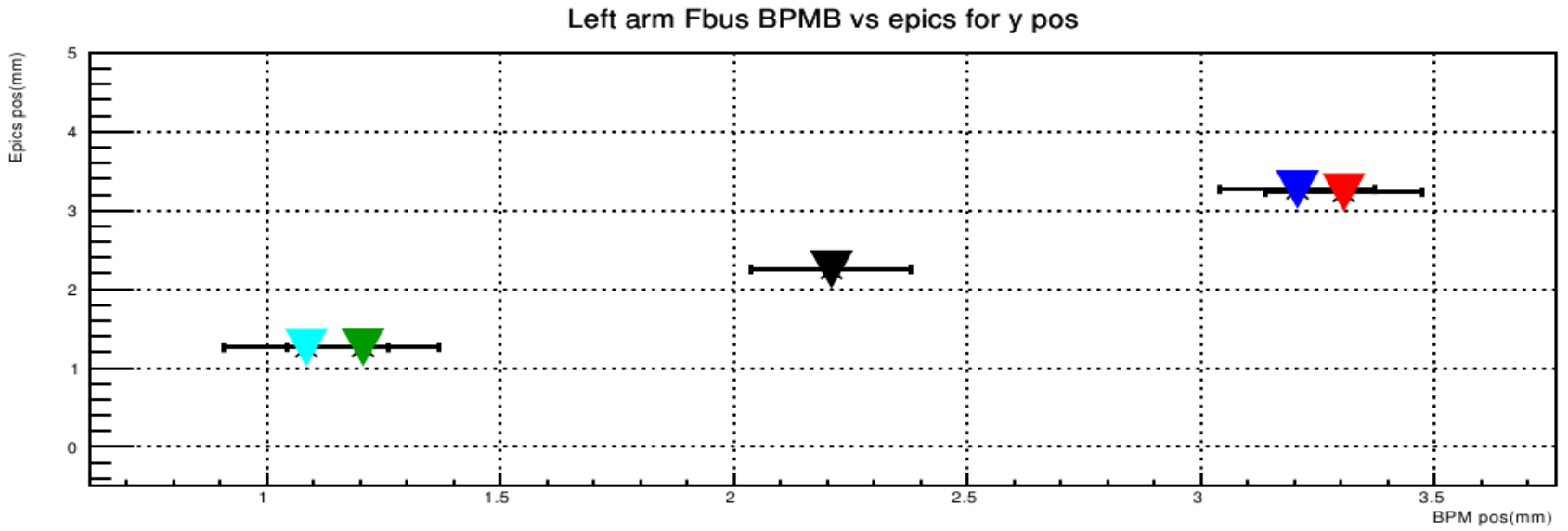


Calibration for Left Arm

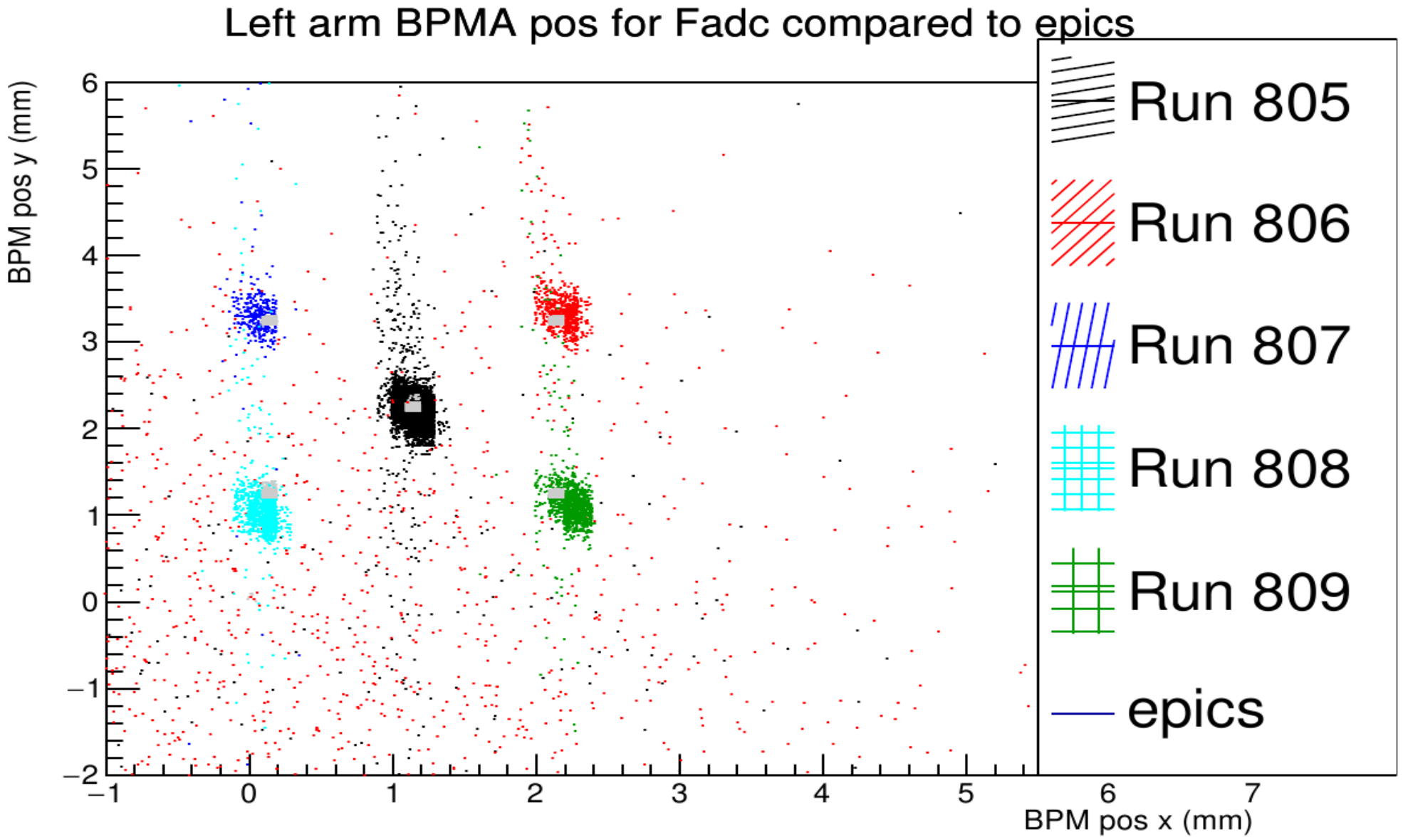


Calibration for Left Arm

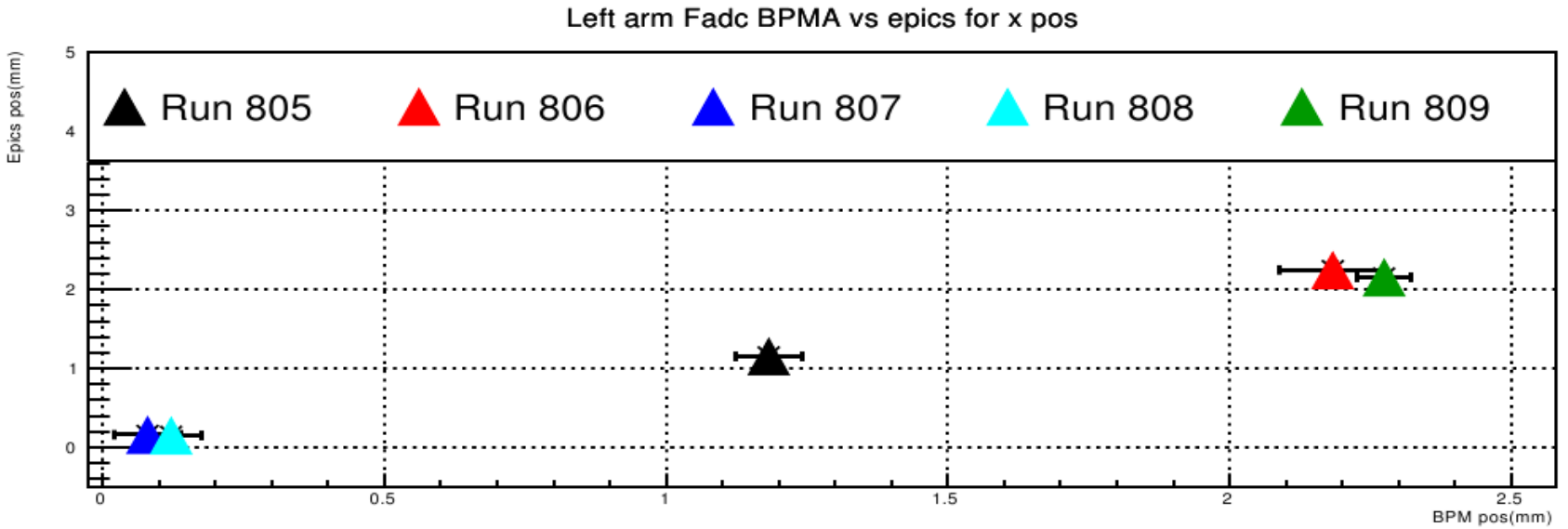


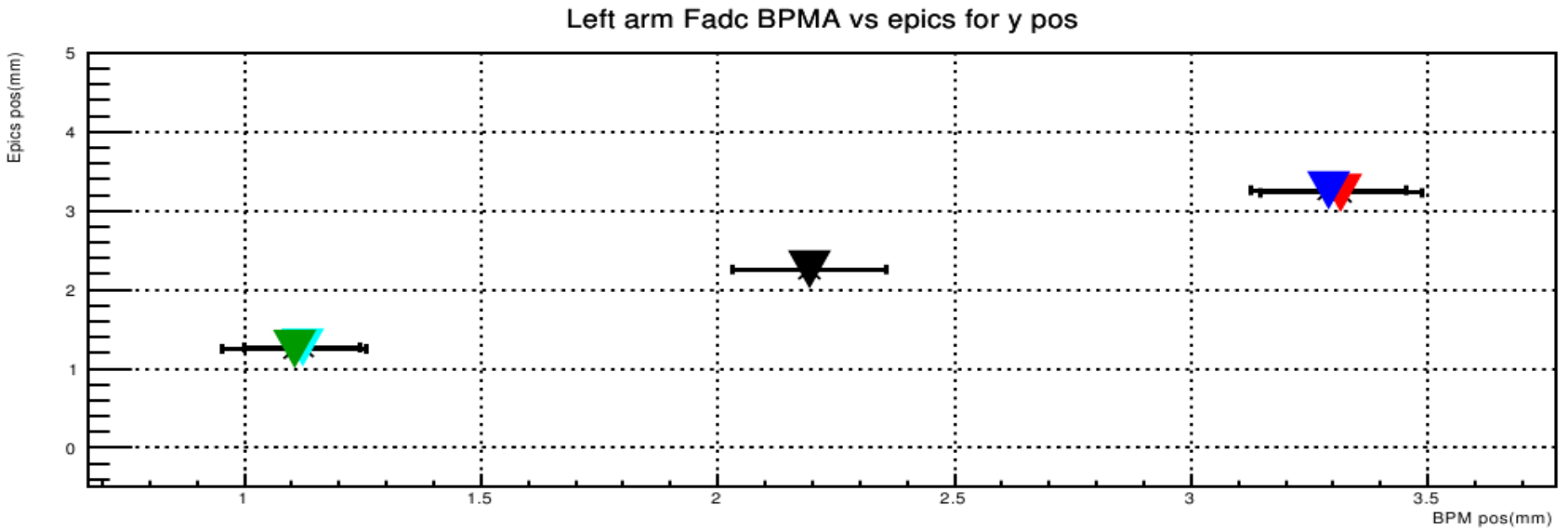


Calibration for Left Arm

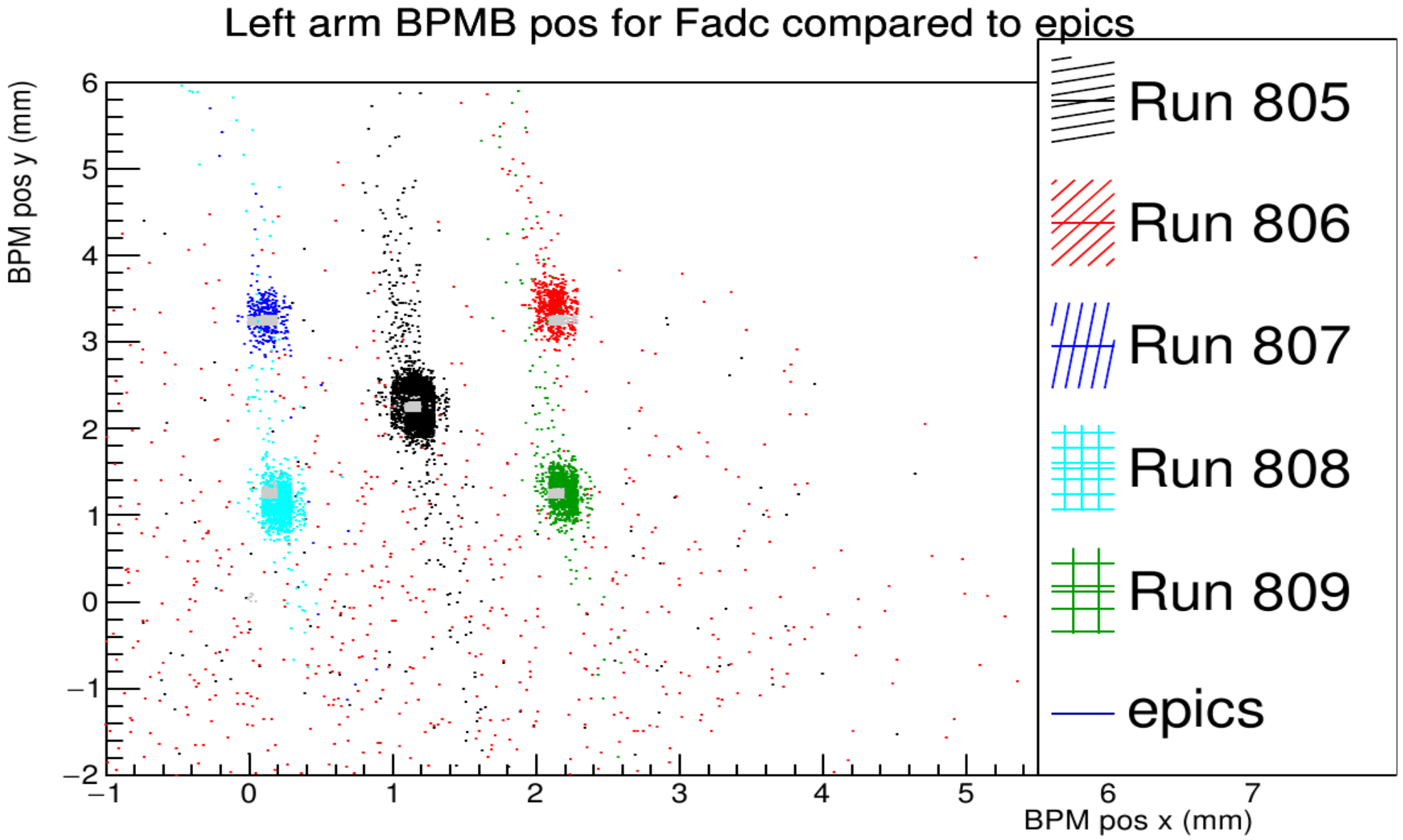


Calibration for Left Arm

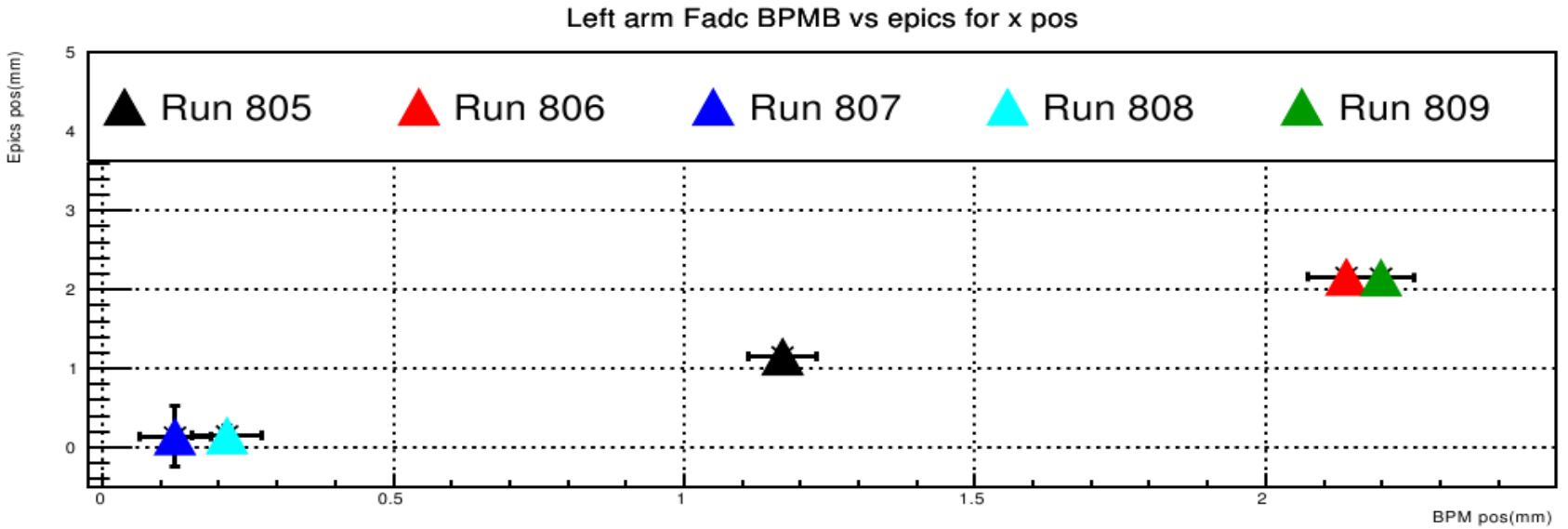


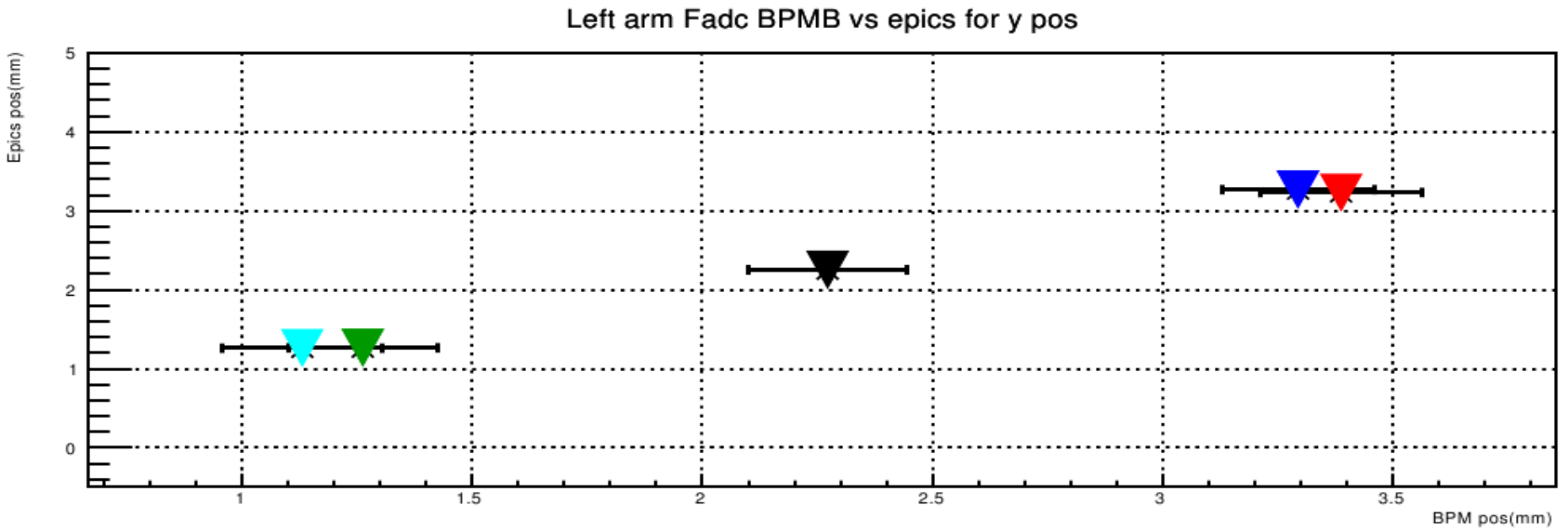


Calibration for Left Arm

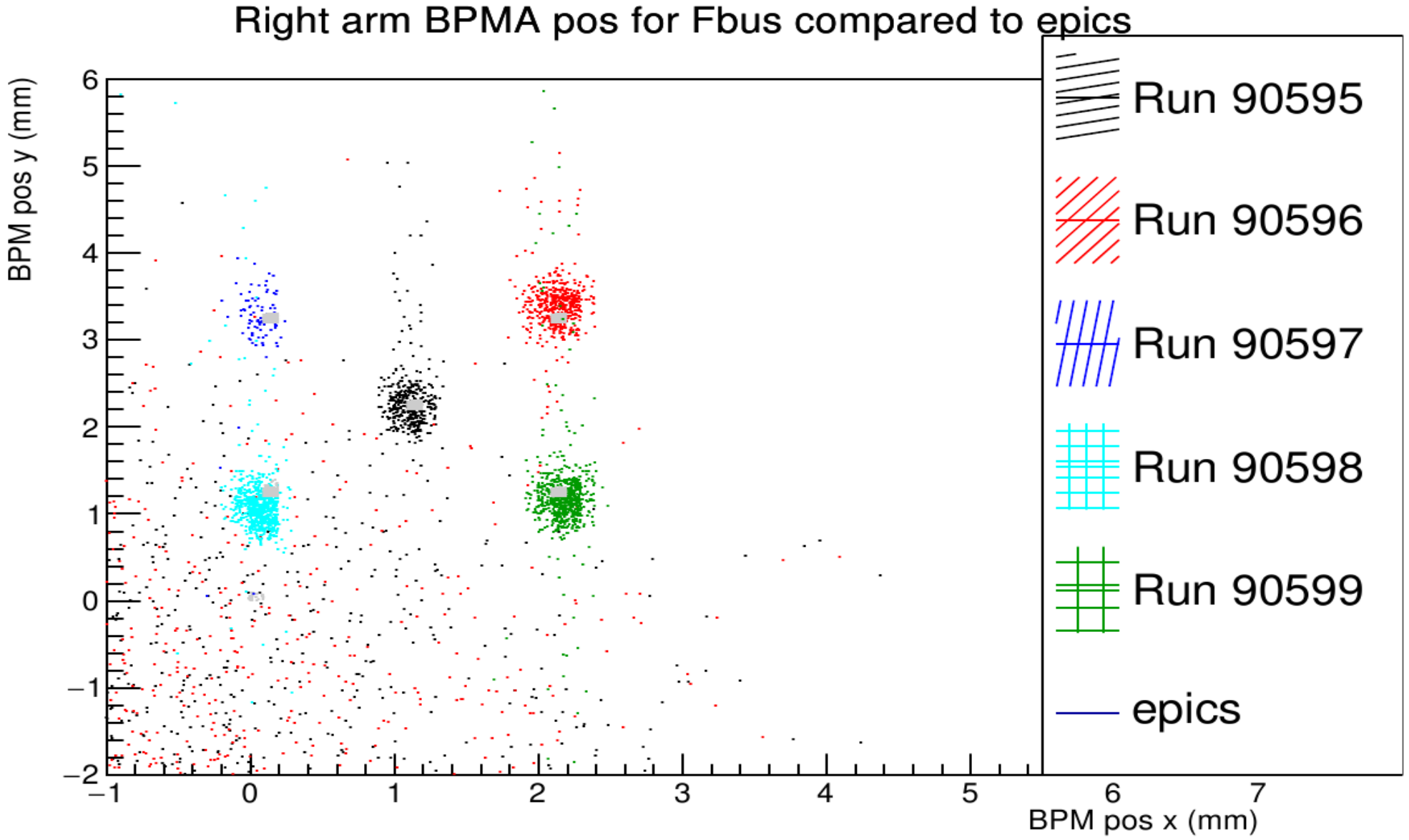


Calibration for Left Arm

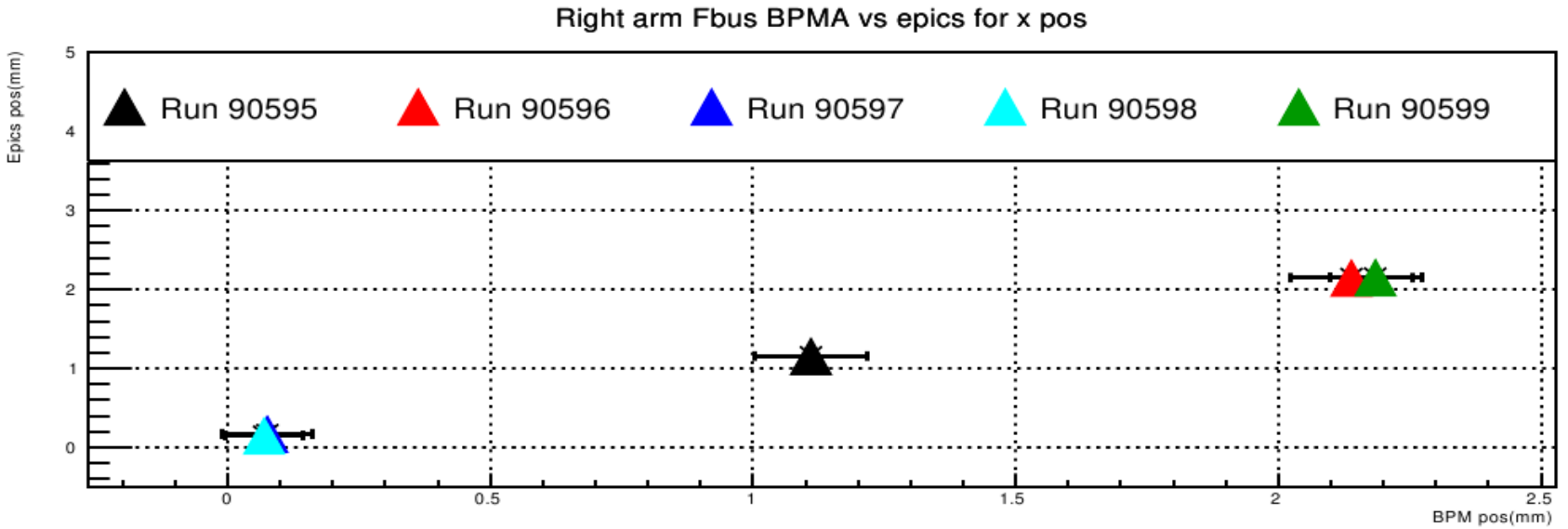


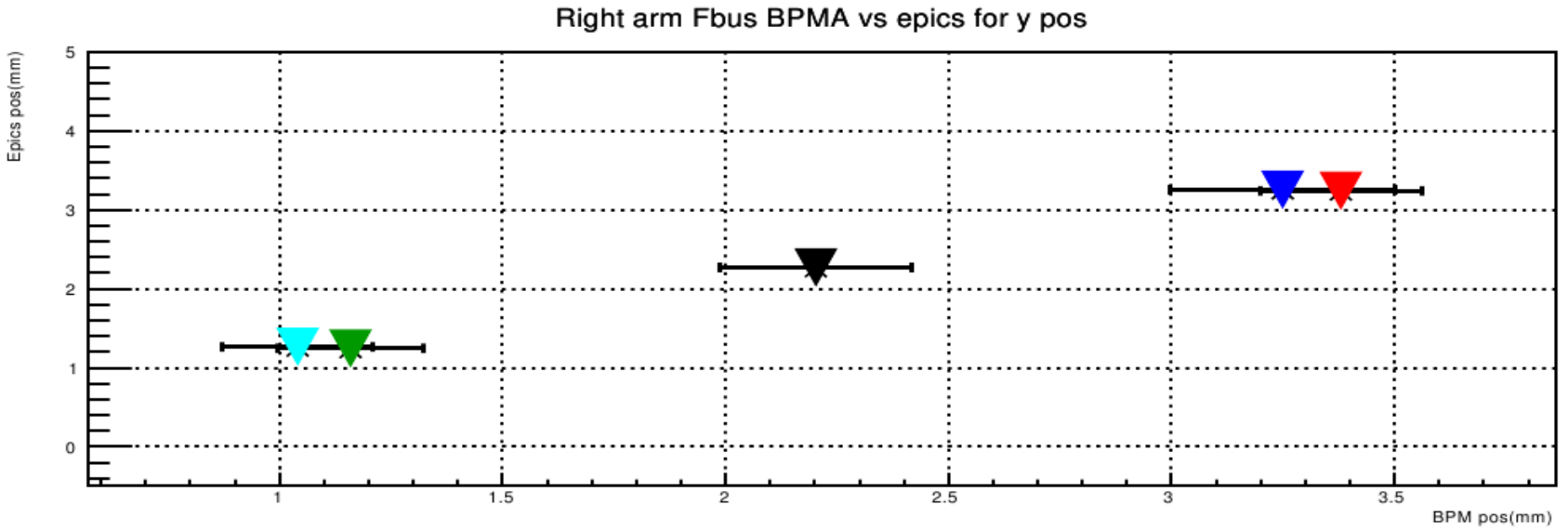


Calibration for Right Arm

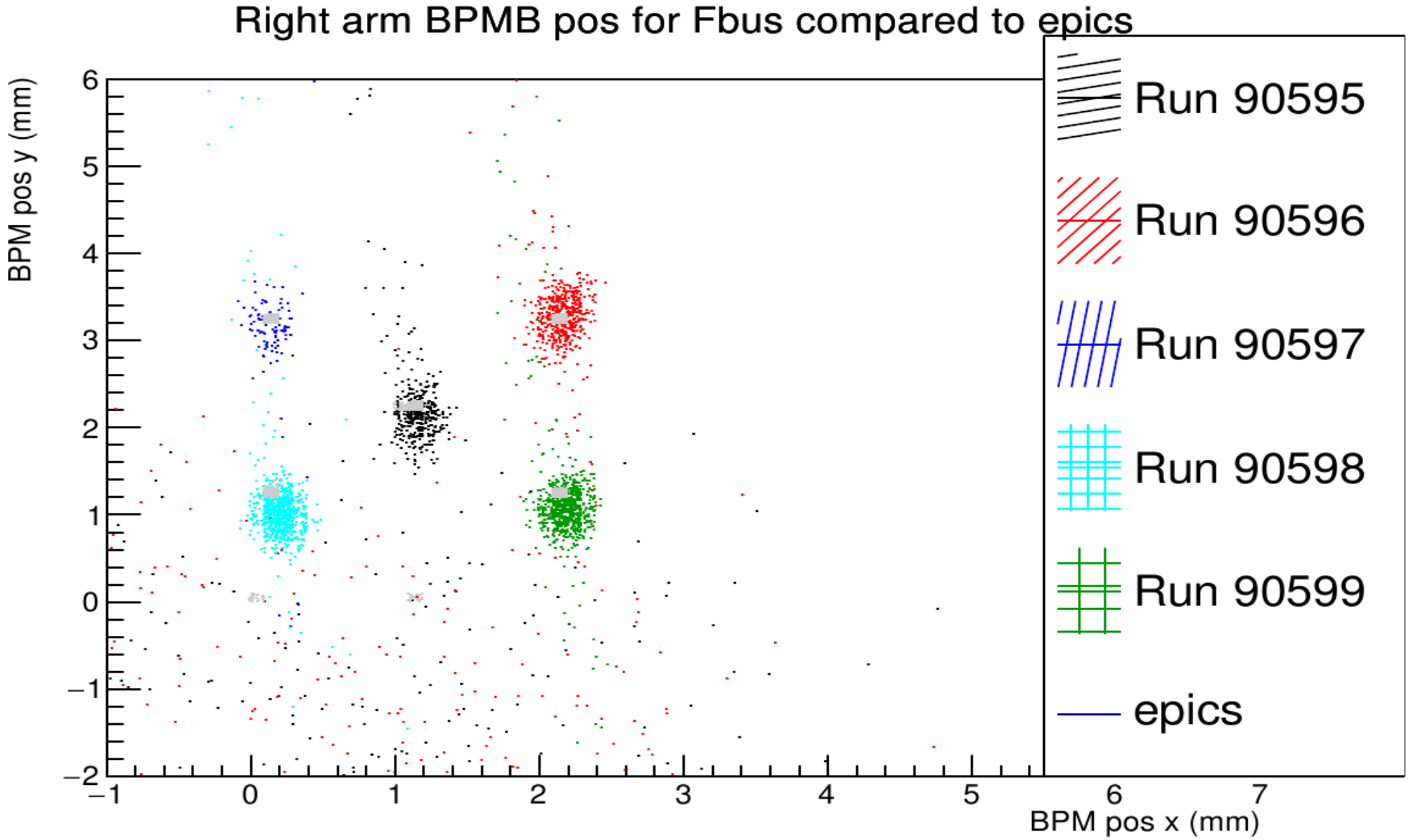


Calibration for Right Arm

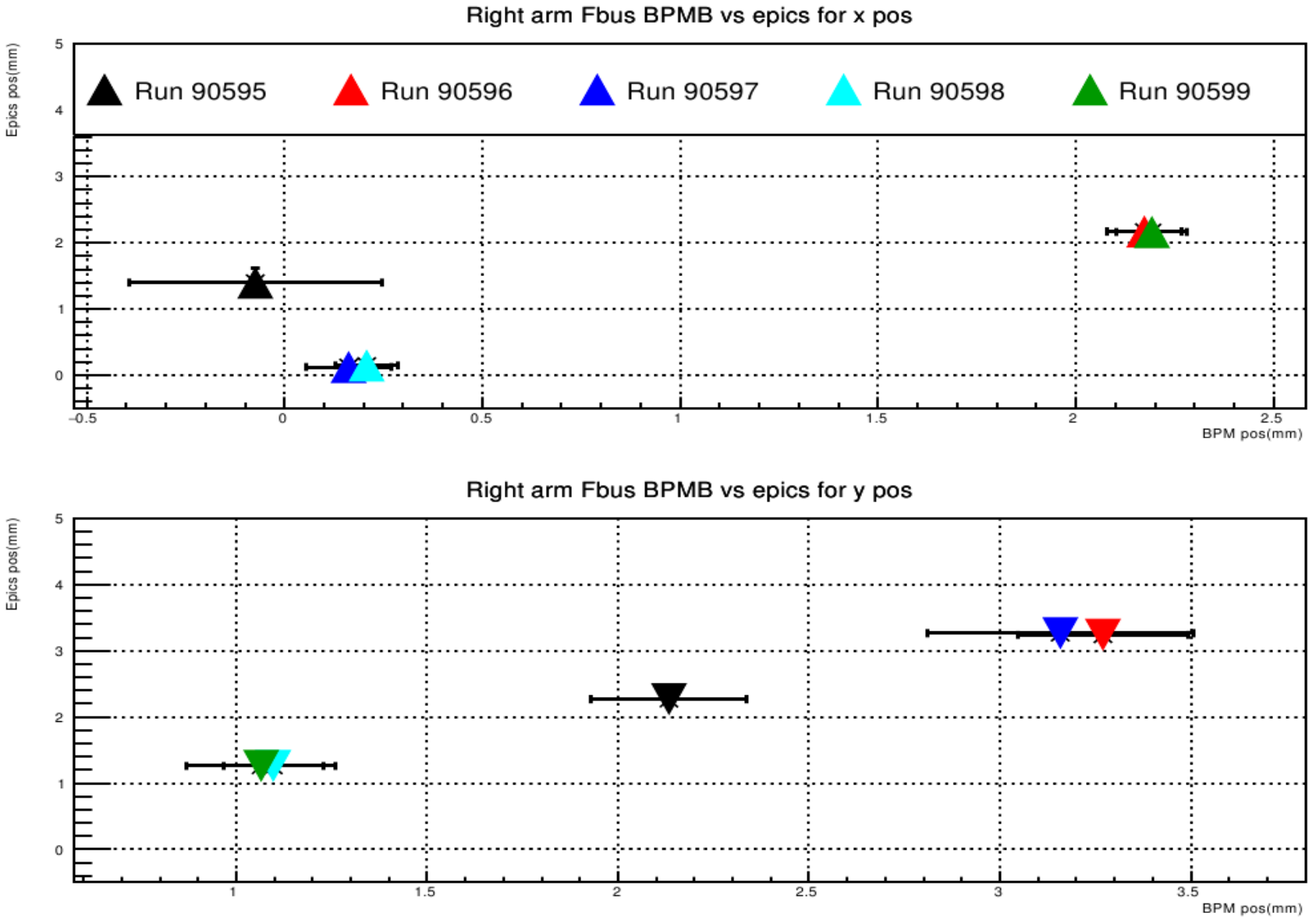




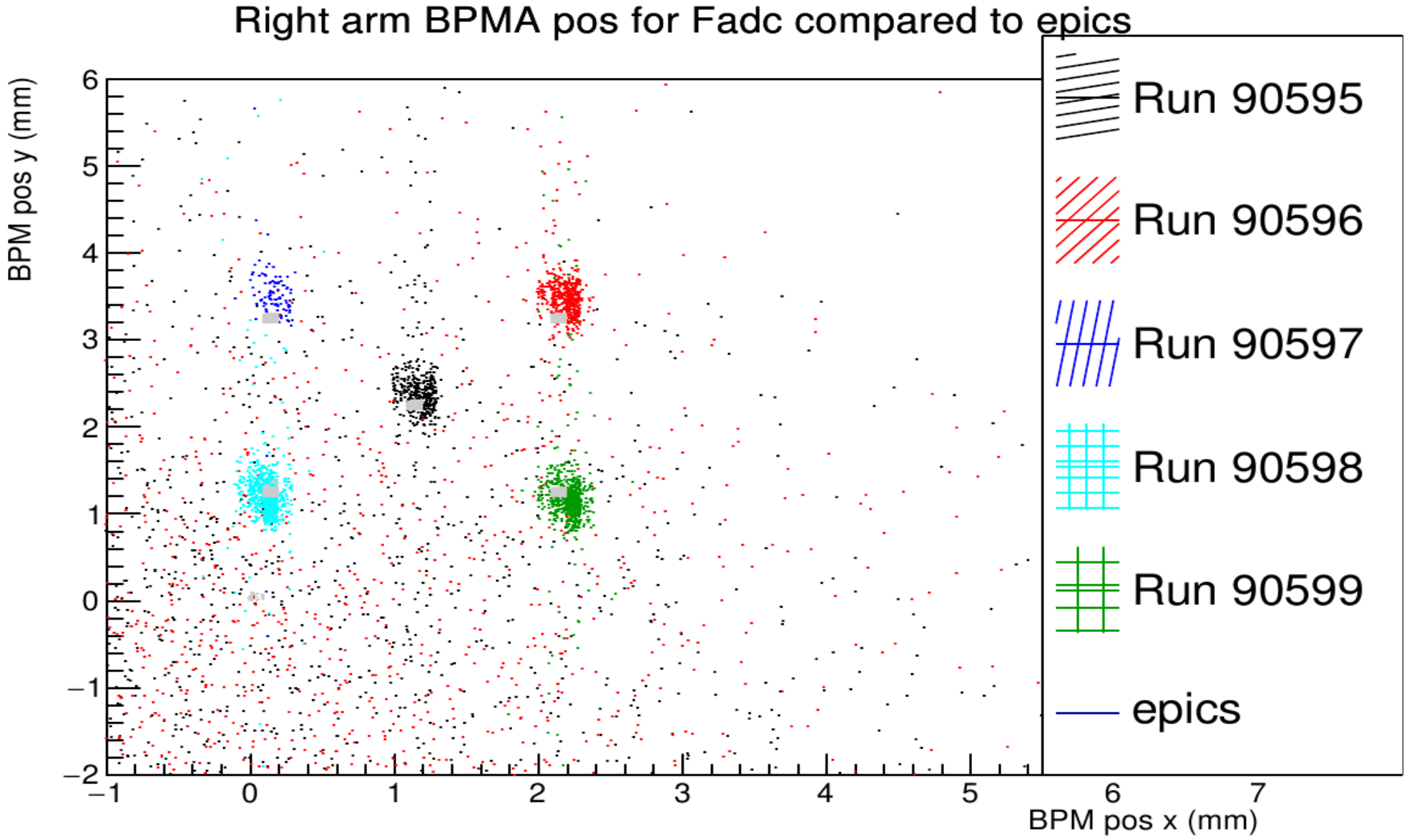
Calibration for Right Arm



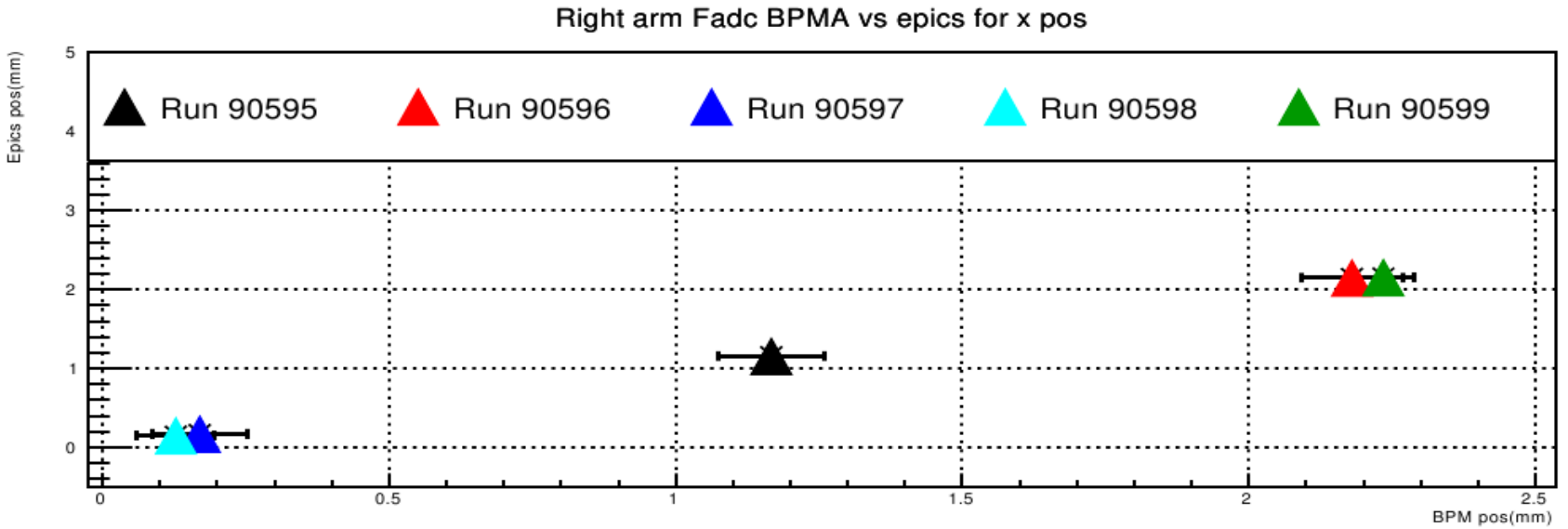
Calibration for Right Arm

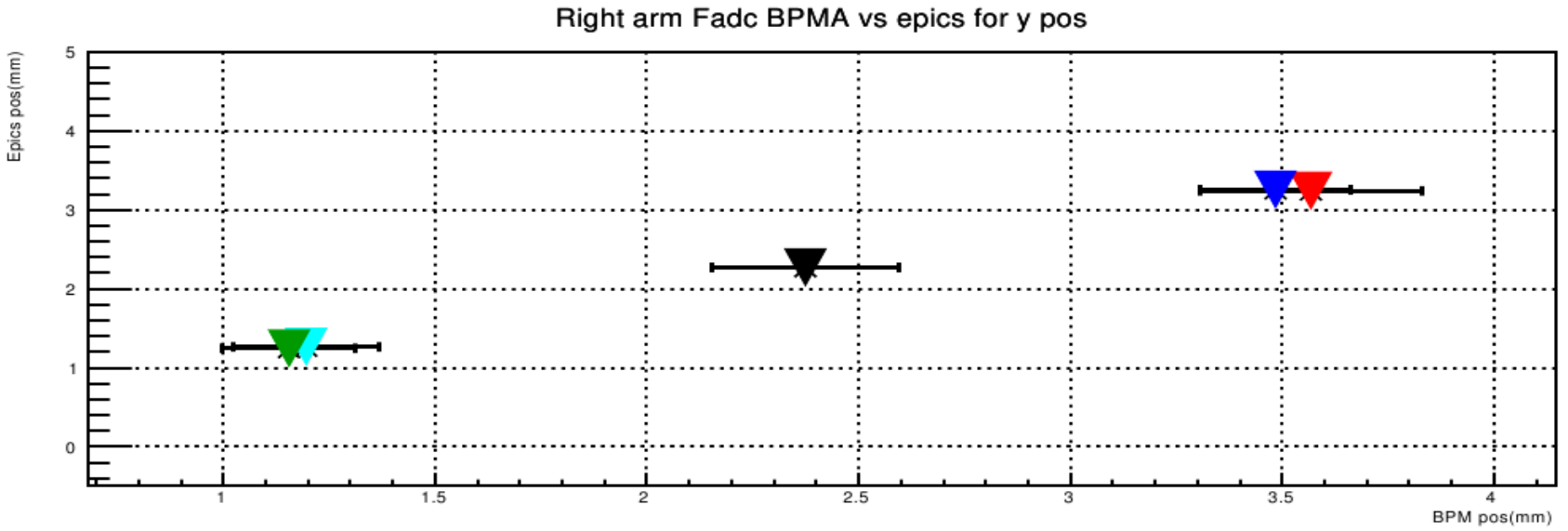


Calibration for Right Arm

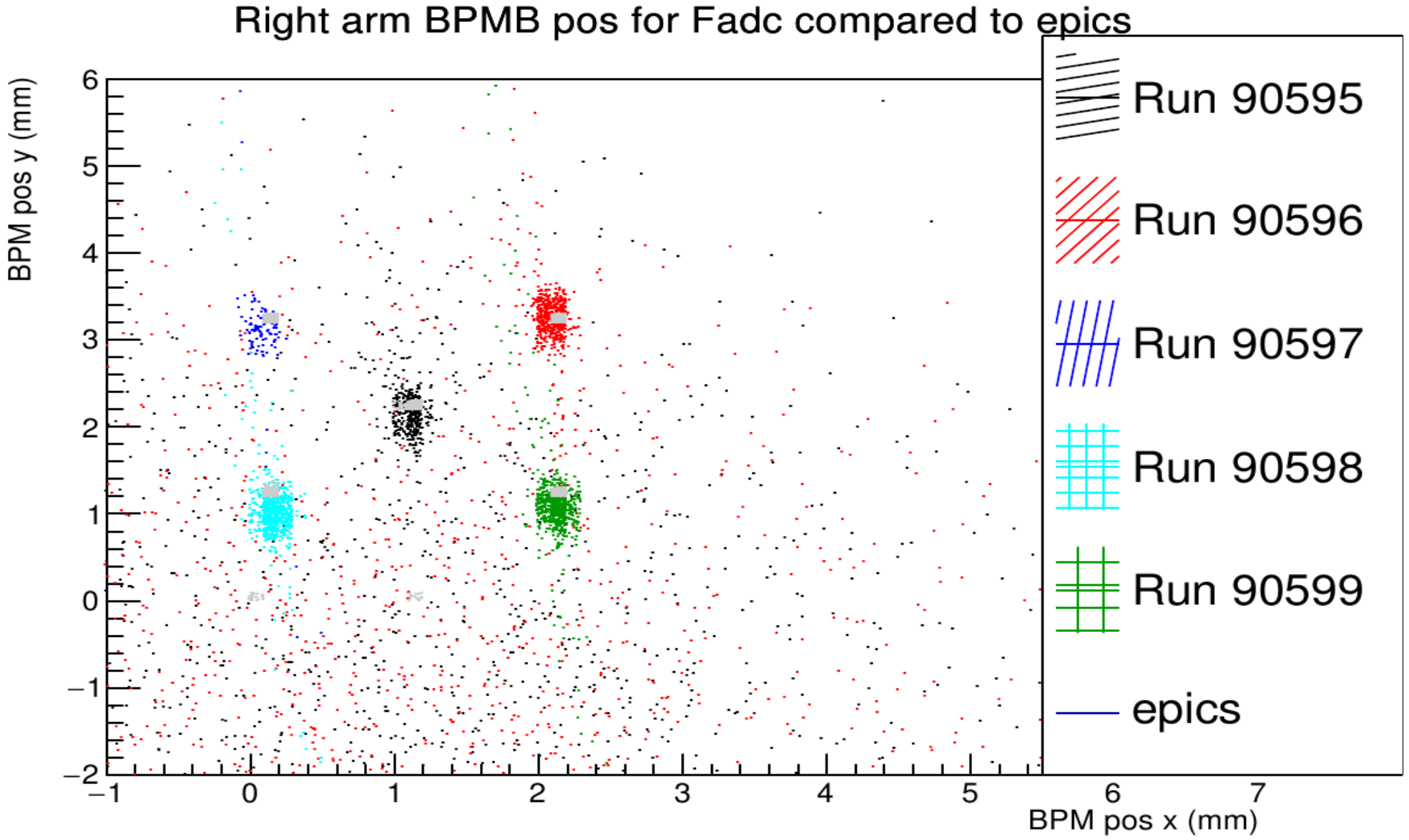


Calibration for Right Arm





Calibration for Right Arm



Calibration for Right Arm