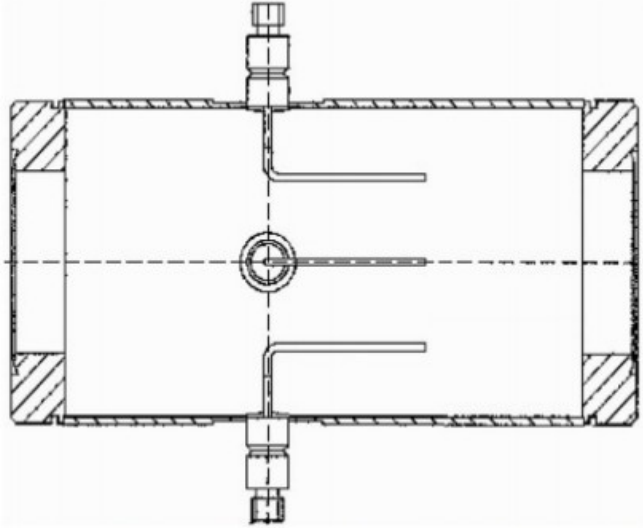


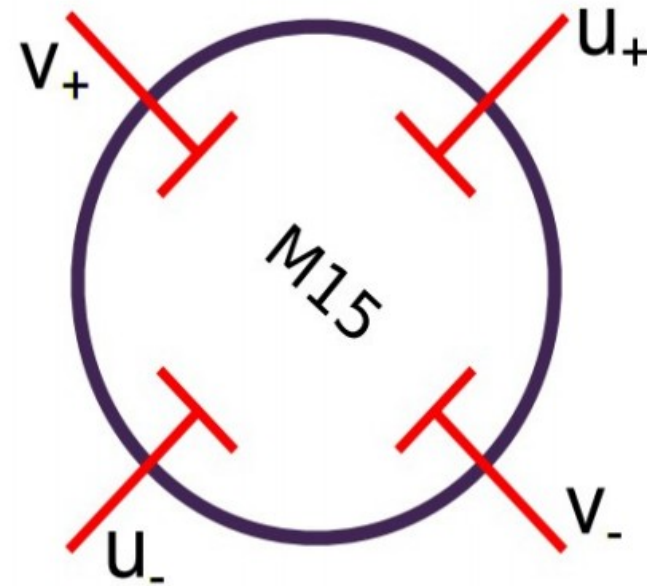
# Analysis work: Bane

- Creation of efficiency/charge table.
  - Converting some efficiency scripts from root 5 (argon analysis) to work for MARATHON.
  - Converting common algorithms into functions for header files:
- Trying to practice with batch & swif
- BPM calibration

# BPM Calibration May 3rd



(a) BPM design diagram, from JLab instrumentation group



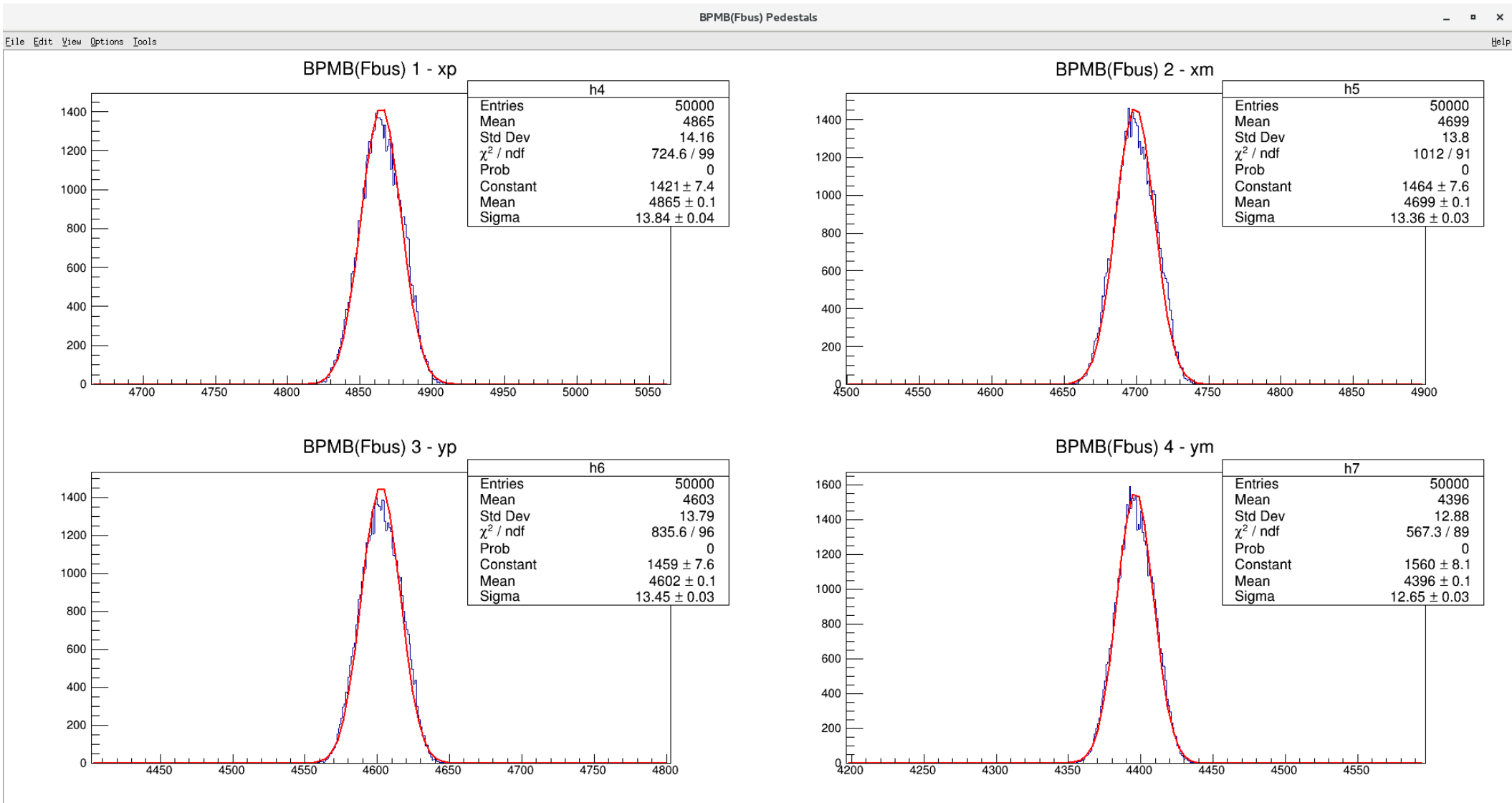
(b) BPM chamber which contains 4 antennas

## BPM and HARP

$$\begin{pmatrix} x \\ y \end{pmatrix}_{\text{Lab}} = \begin{pmatrix} C(0,0) & C(0,1) \\ C(1,0) & C(1,1) \end{pmatrix} \times \begin{pmatrix} x \\ y \end{pmatrix}_{\text{BPM}} + \begin{pmatrix} \text{Offset}(0) \\ \text{Offset}(1) \end{pmatrix}$$

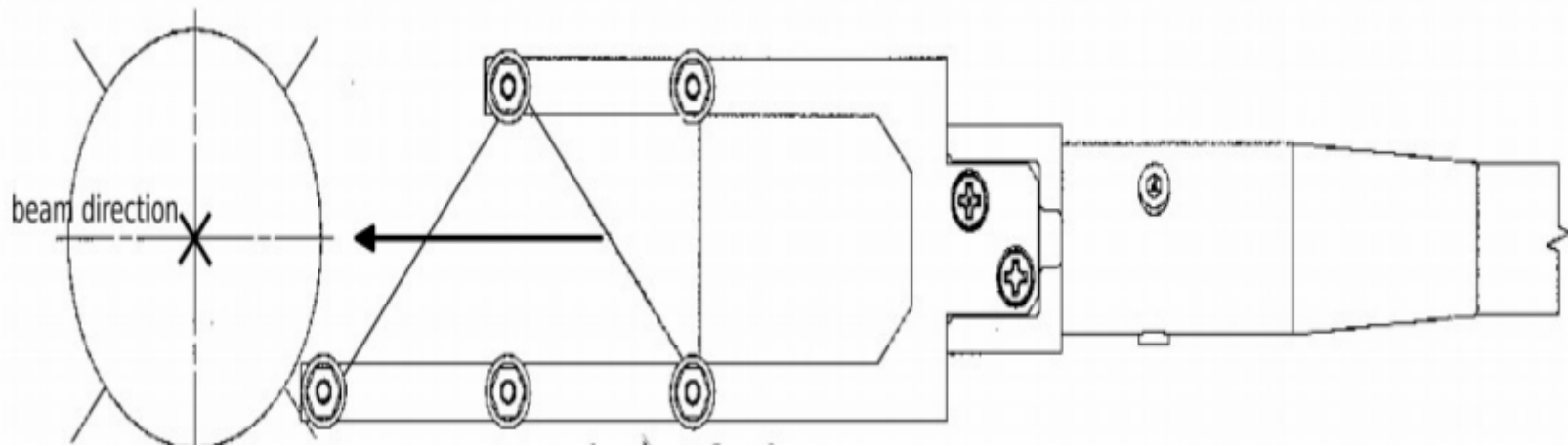
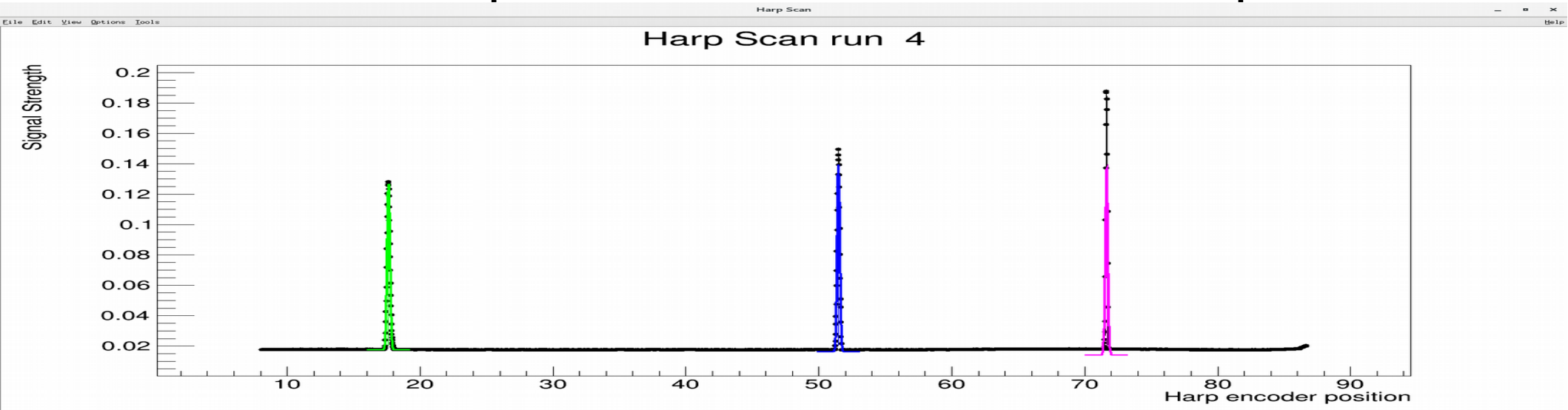
# BPM Calibration May 3<sup>rd</sup>

## Get New BPM Pedestals



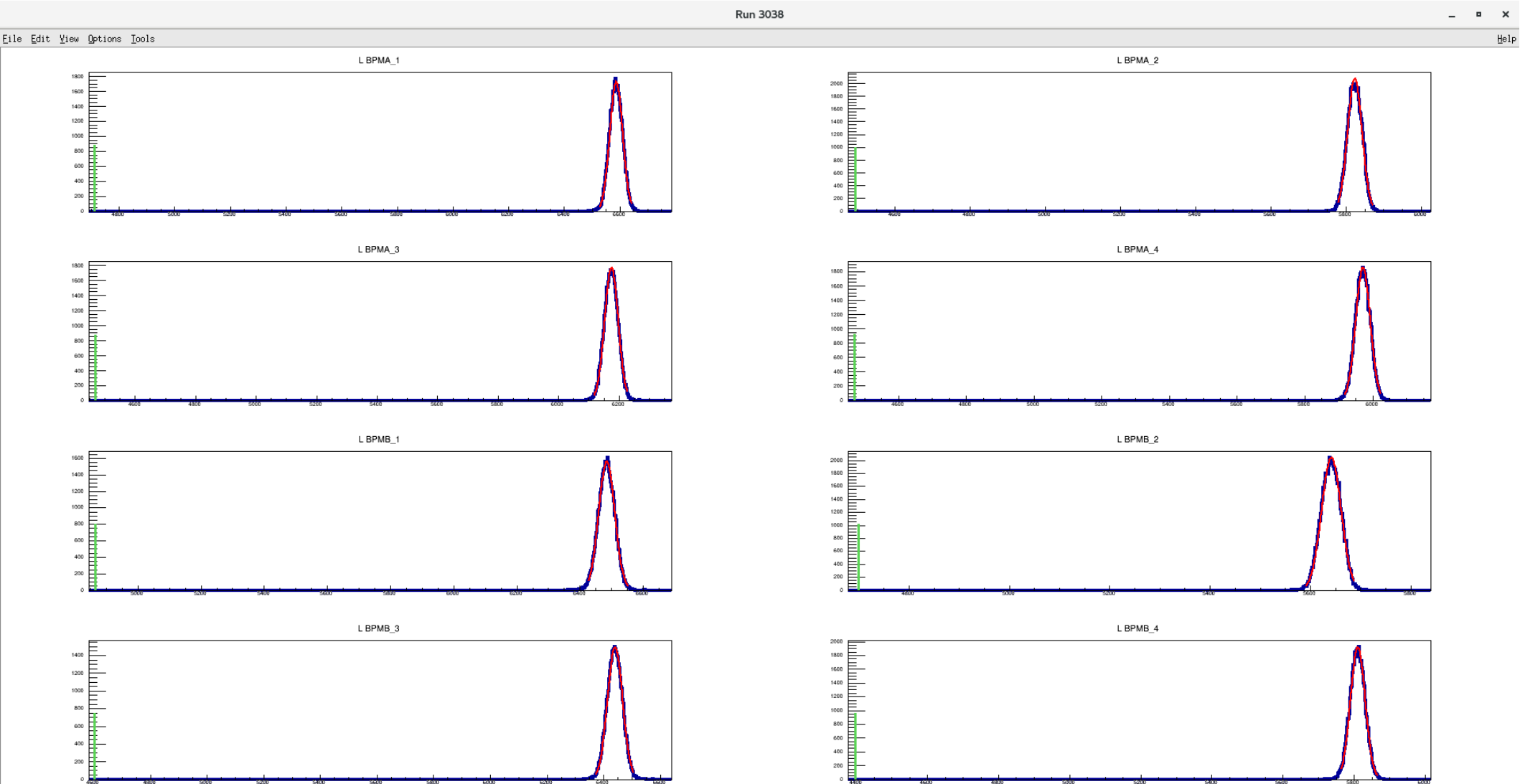
# BPM Calibration May 3<sup>rd</sup>

Find the position recorded from the Harps



# BPM Calibration May 3rd

- Fit the BPM signal for wire on each run: Example one  
Run(3038): 4 wires from both BPMA and BPMB



# BPM Calibration May 3<sup>rd</sup>

## Fadc LHRS

- Please change the L BPMA constants to:
  - -0.798246 0.805189 0.833403 0.819749 0.00261969 -0.000137012
- Please change the L BPMB constants to:
  - -0.637556 0.763405 0.642592 0.746022 0.00116969 -0.00016055
- $C_{00}$   $C_{01}$   $C_{10}$   $C_{11}$   $\text{Offset}_x$   $\text{Offset}_y$
- More results can be found on my Elog post:
  - <https://hallaweb.jlab.org/dvcslog/H3/41>

# BPM Calibration May 3<sup>rd</sup>

Right arm BPMA pos for Fbus compared to harps

