

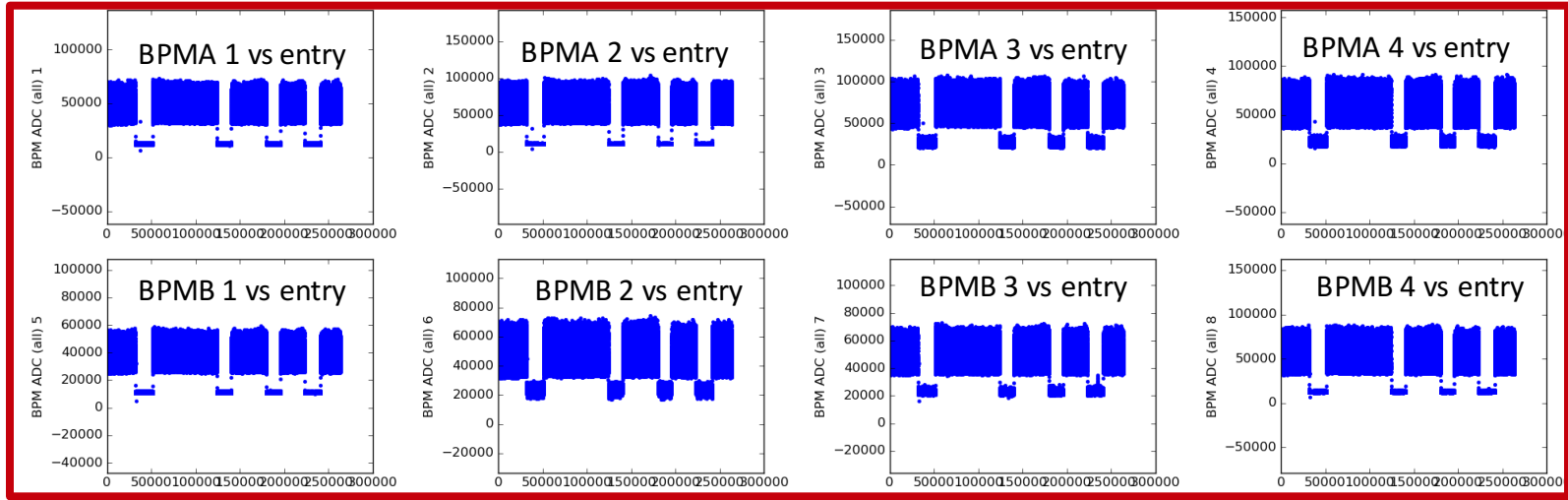
# Beam check- pedestal study

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06/15/2016

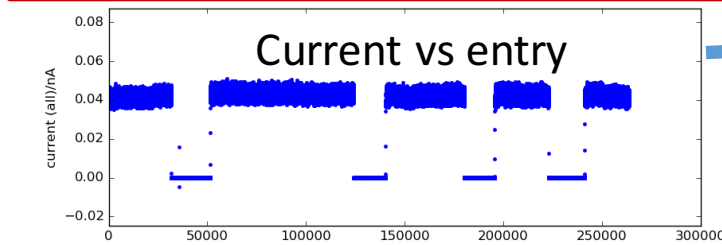
## Pedestal Study

- How to select pedestal from beam trip
- Difference from the previous pedestal study:
  - Use 0.1 nA cut (previous is 2 nA)
  - 2000 additional events (about 2s due to helicity trigger) cut at the beginning and end of the cutted range (same as the previous one)
  - Removed run with pedestal events less than 10000 ( previous is 100)
  - rms of 1st chan of BPM A pedestal must less than 1000 (new here )
  - rms of 3rd chan of BPM B pedestal must less than 2100 (new here)
  - Pengjia manually removed weird pedestal jumps by eye (did in the old one, may need to check with yield/simulation)

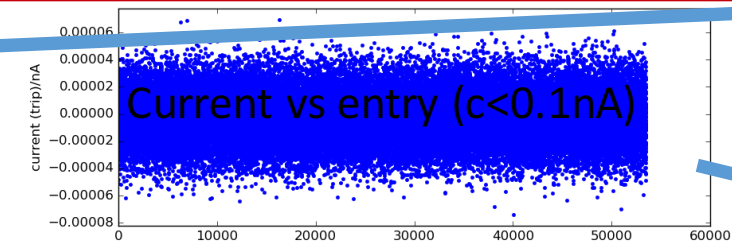


Total Entry: 300k  
Trip entry: 60k

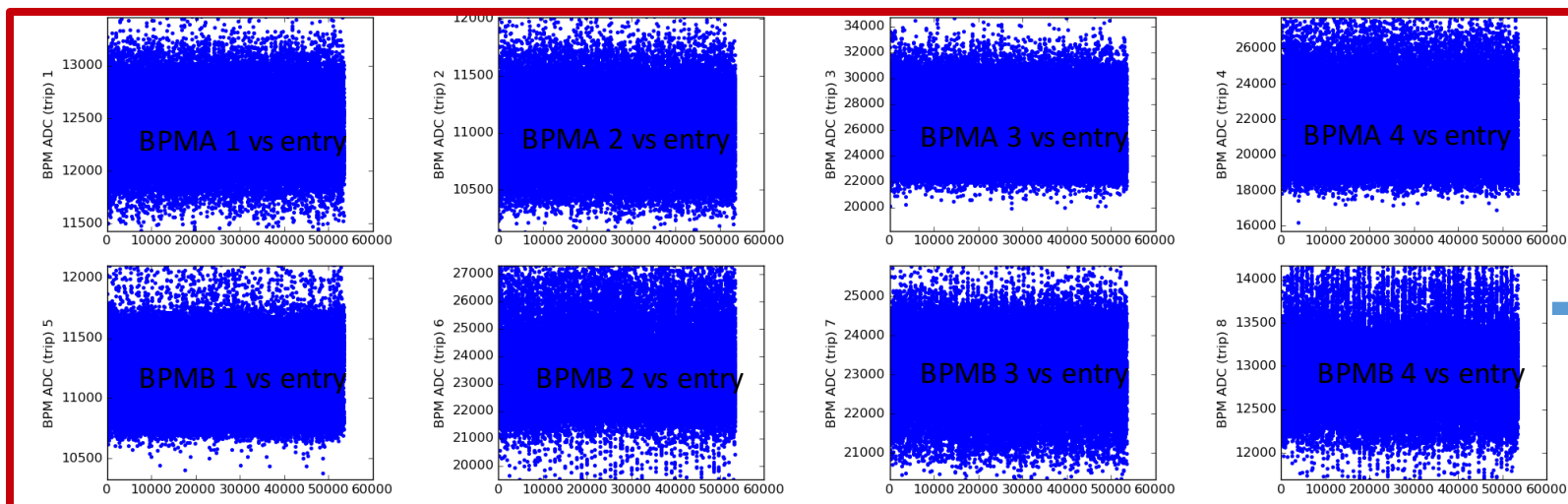
BPM raw for whole run



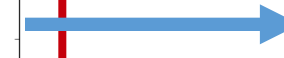
Current for whole run (uA)



Current for tripped part (uA)



BPM raw for tripped part (after applying the cut in page 8)



## Carbon Cover (carbon sponge)

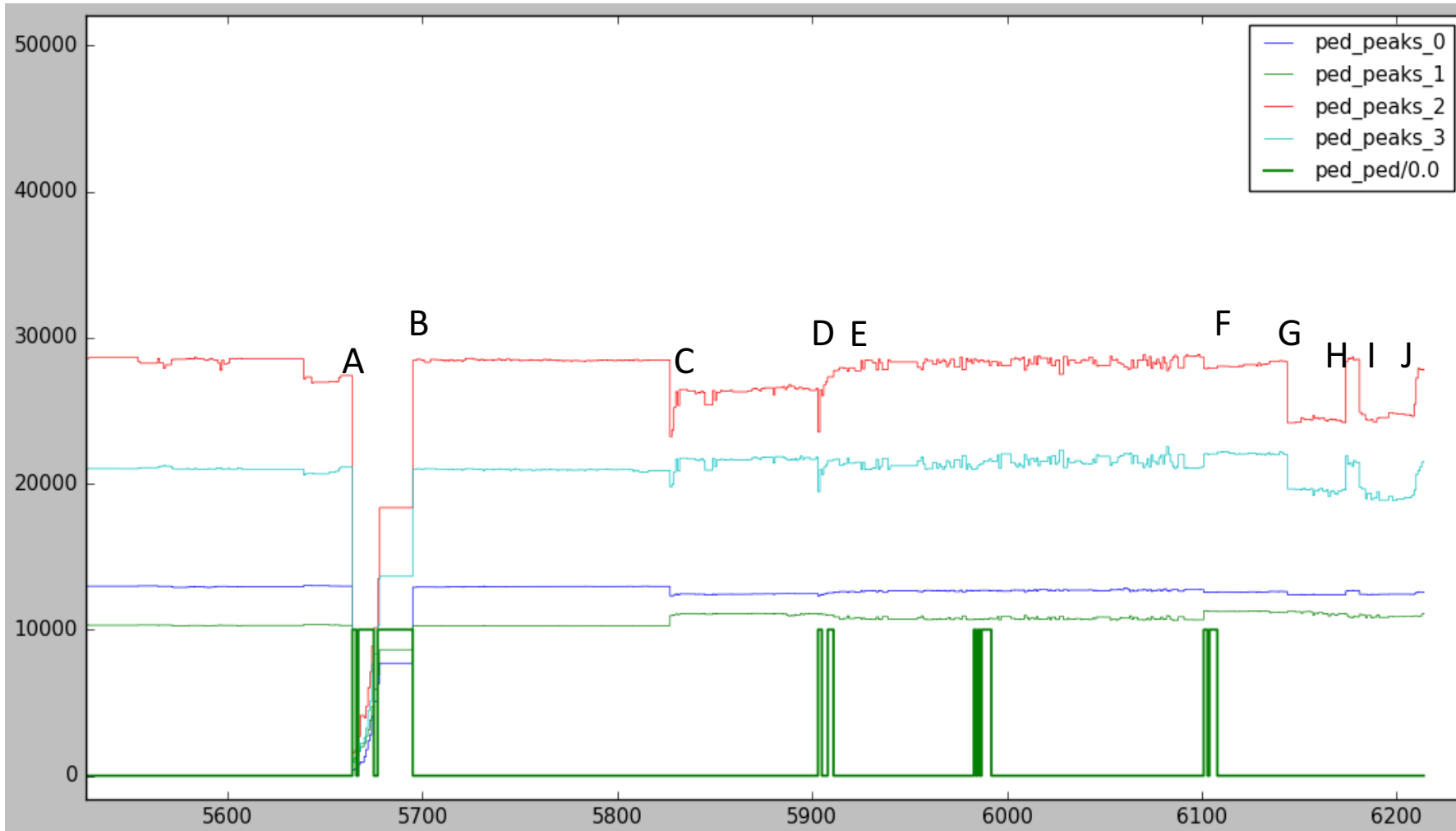


- carbon sponge put inside the case of the BPM receiver
- not electronic
- used to absorb the background radiation
- about 1mm thick

Carbon cover added twice ( one near 5817, one near 5903)

BPM gain/division setting did not change from run 5485 to 6218

# Pedestals for each BPM A channel



A: septum trip, broken water line

A-B: most are gain testing runs/  
beam position check runs  
pedestal run 5681/5659

C: add carbon cover, move bpm  
receiver to ground

D-E: add 2<sup>nd</sup> carbon cover near 5903  
5903-5908 pedestal runs  
5909-5919 bpm calibration runs  
5920-5923 bpm check runs

F: target anneal and moved to 3.3gev

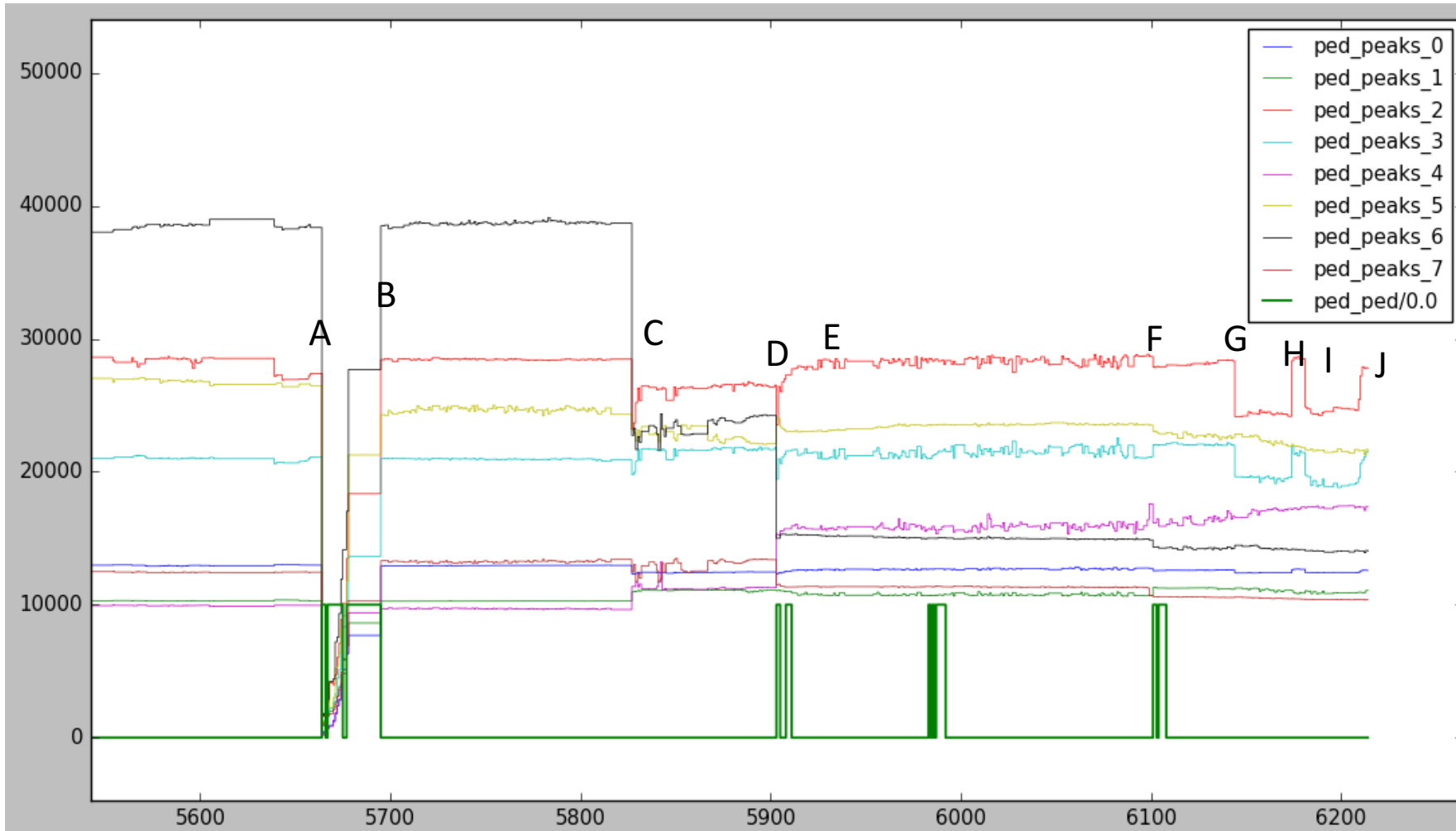
G: septum power supply issue, water  
in hall, beam back 20 hours later

H: target anneal, bcm calibration  
beam back in 2 hours

I: beam off to check septum current  
trip, one hour

J: need check power system, 5 hours  
later, beam back

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