

SNU-HEP Lab Meeting Presentation

Date: 2018-12-03

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Pbar beam data

Data Num	date	eventNum	Data length
665,666	8/10	27(7us)	8us
763	10/12	53	16us
772	10/19	118	16us
777	10/30	57	16us
785	11/07	37	16us
787	11/09	216	32us

**Geometry
changed(10
/18)**

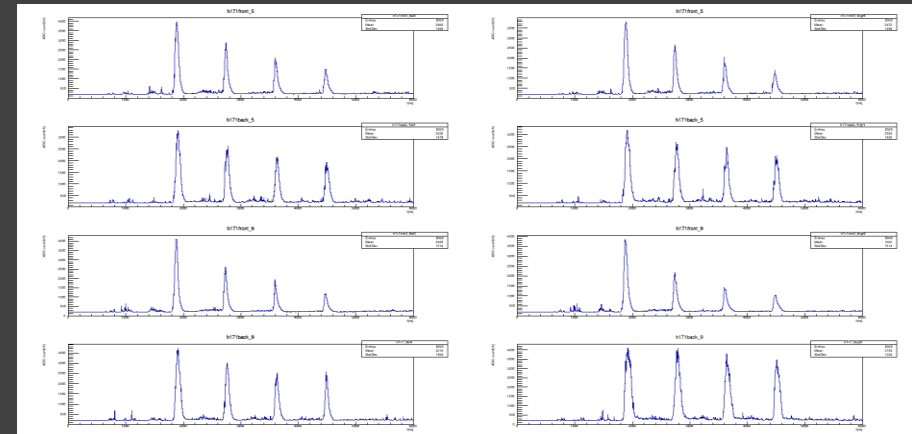
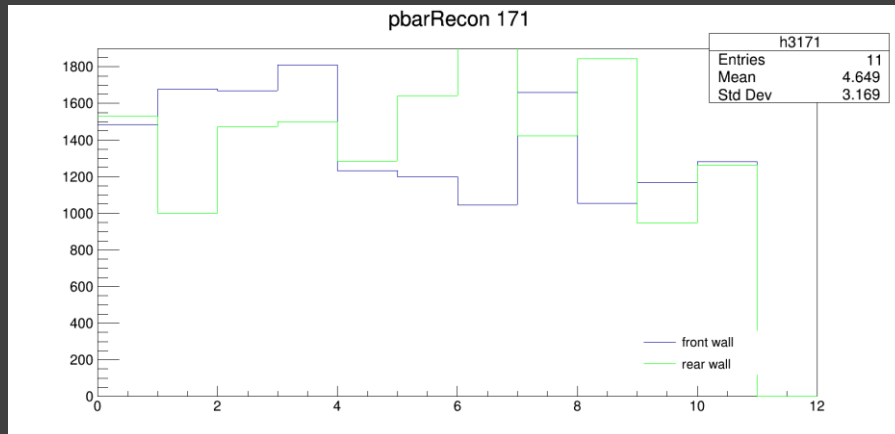
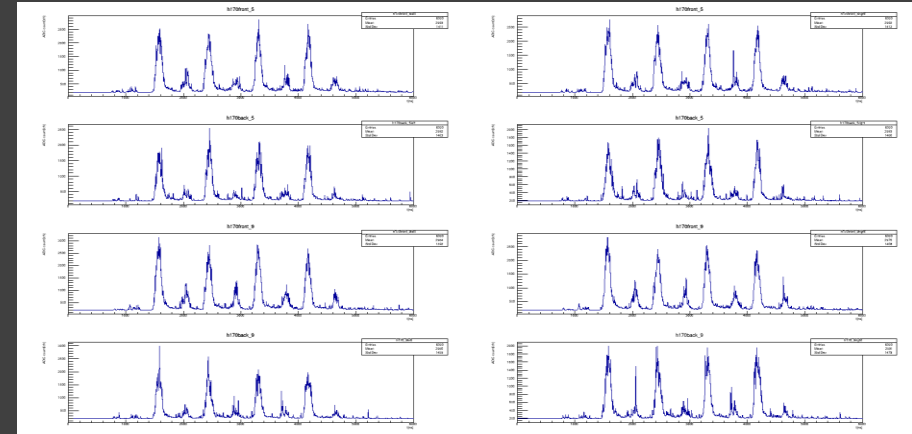
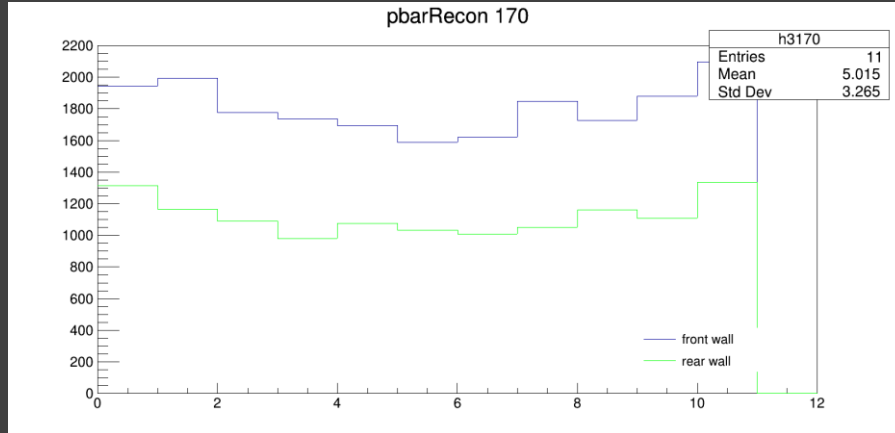
Gain check(center cut, dataNum: 762, 789)

- 762 : 10/11

- 789 : 11/26

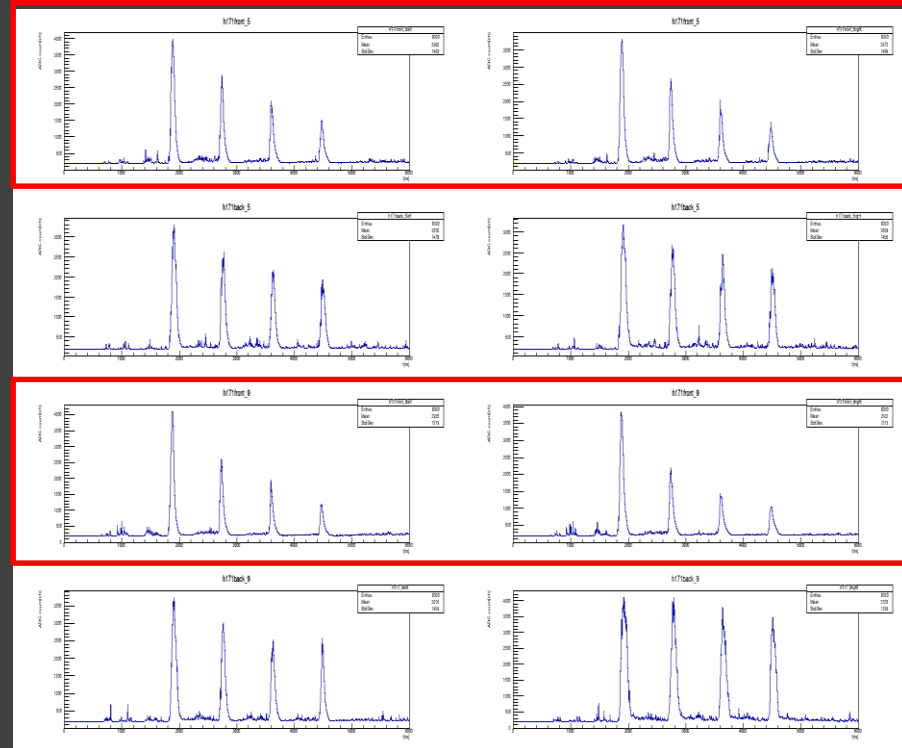
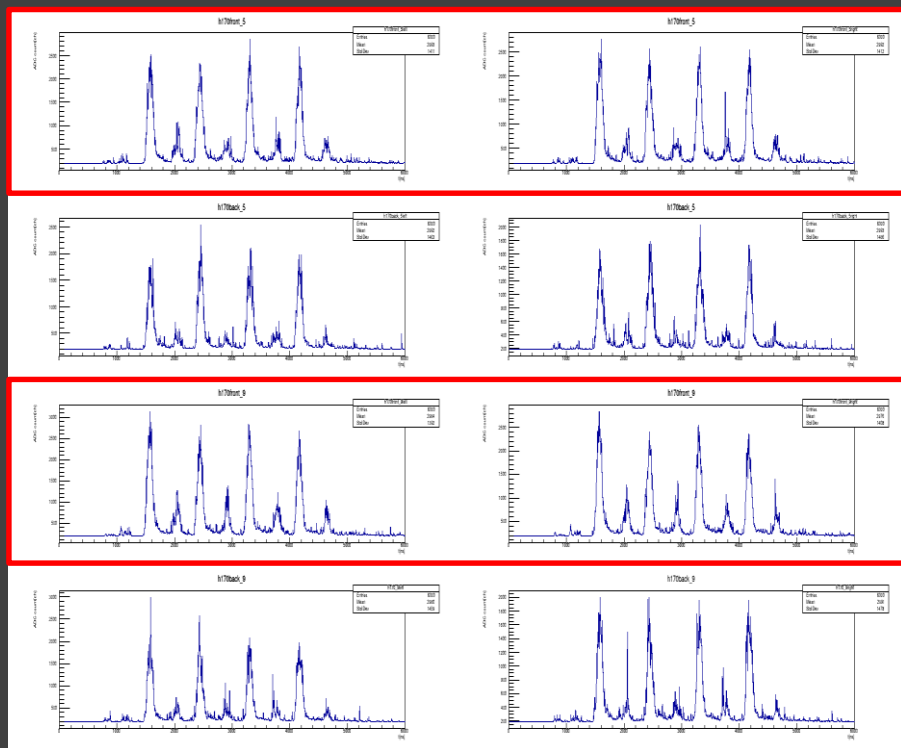
wall1	LEFT MPV [ch]		RIGHT MPV		Wall2	LEFT MPV		RIGHT MPV	
	762	789	762	789		762	789	762	789
01	100.0	97.6	98.0	99.6	13	98.9	98.4	106.1	106.8
02	102.1	100.9	101.4	101.9	14	95.9	97.8	105.4	106.6
03	97.3	90.7	100.3	101.1	15	99.2	102.1	100.3	101.2
04	99.8	99.0	102.1	101.5	16	99.9	100.6	98.0	99.5
05	101.4	102.3	101.6	100.6	17	99.3	101.9	97.6	98.5
06	99.7	101.0	100.0	102.4	18	101.2	101.1	99.1	100.3
07	99.9	101.0	98.3	107.8	19	99.1	99.1	100.3	101.3
08	100.1	100.3	100.3	102.5	20	100.3	99.8	102.0	103.1
09	101.0	100.8	101.3	101.6	21	98.9	99.8	100.9	101.5
10	100.3	99.8	101.5	102.6	22	101.4	101.1	99.6	101.4
11	101.4	102.2	101.0	103.8	23	99.6	99.5	99.0	98.7
12	99.8	100.2	101.6	103.3	24	100.3	98.3	99.7	99.8

Event analysis(data 787: event 171&172)



- 171: a few hits pions 8 bunches(from ELOG , antion)
- 172: 4 bunches of pbar shots. Many prions(pbar mcp still IN)

Event analysis(data 787: event 171&172)



171: similar to front and back

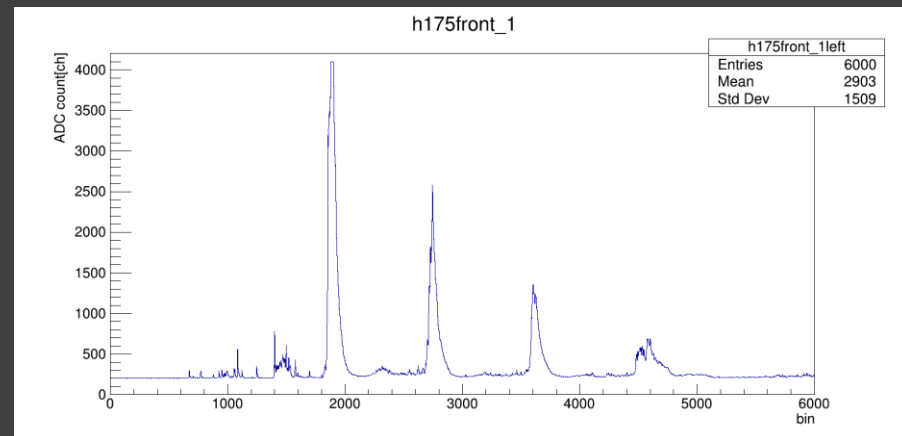
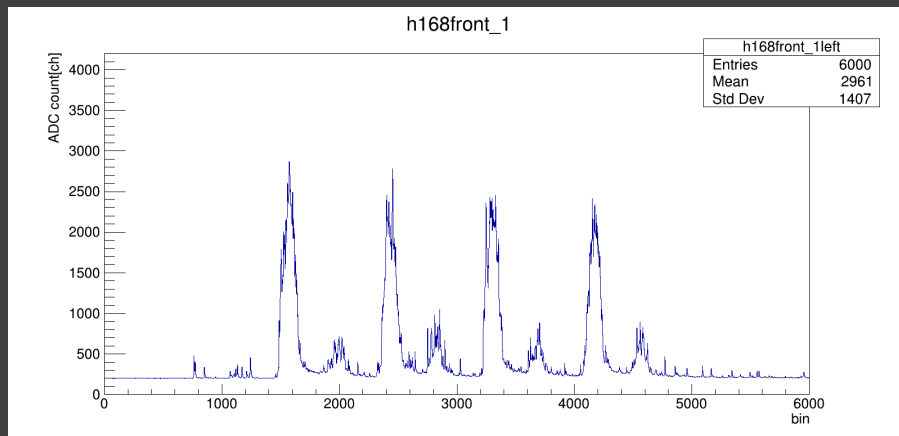
171: front wall

- 171: a few hits pions 8 bunches(from ELOG , antion)

172: different between front and back(more attenuated in front)

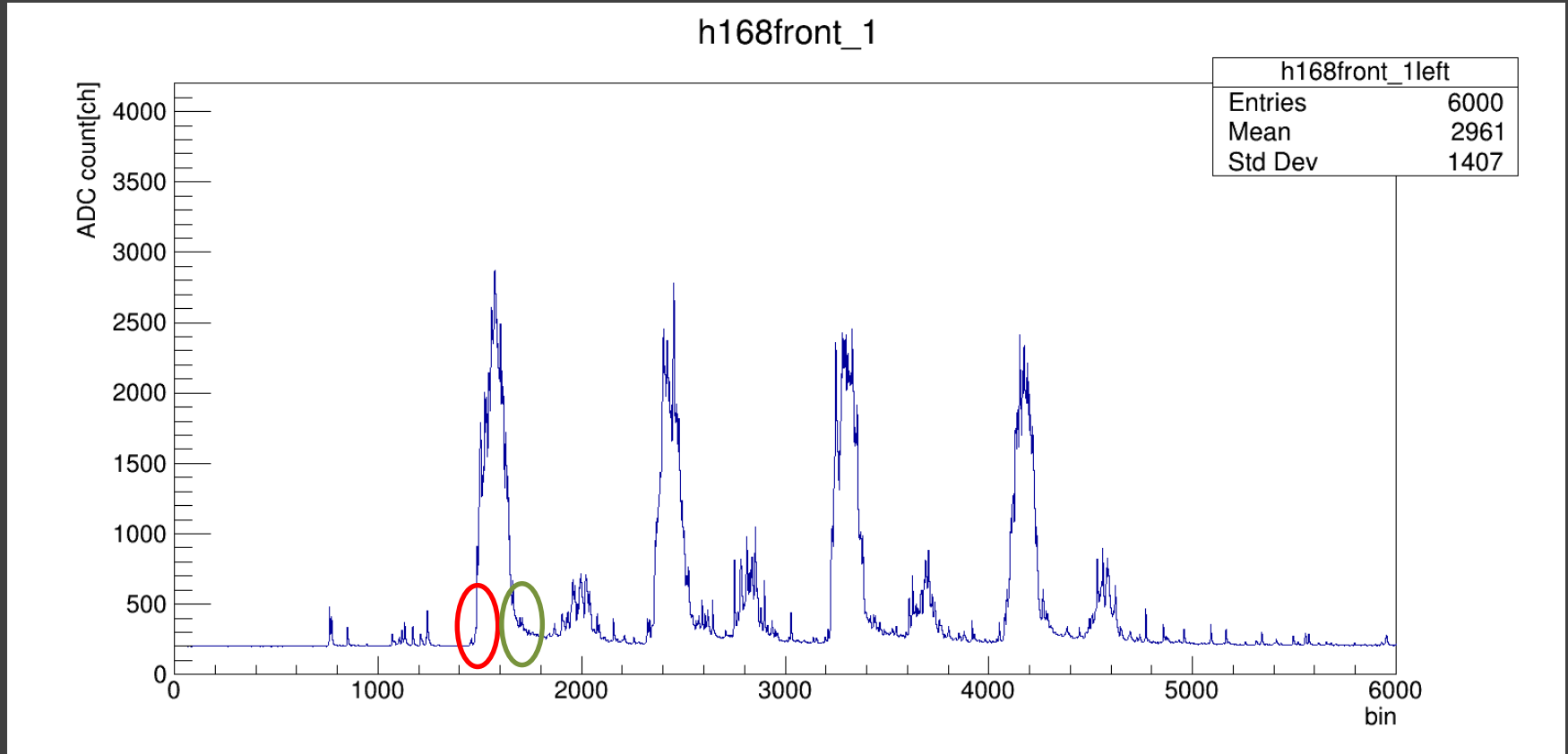
- 172: 4 bunches of pbar shots. Many prions(pbar mcp still IN)

4 shots Event analysis(data 787)



The number of 4 shots events : 53
Ntuple root file with 4 shots events

4 shots Event analysis(data 787)

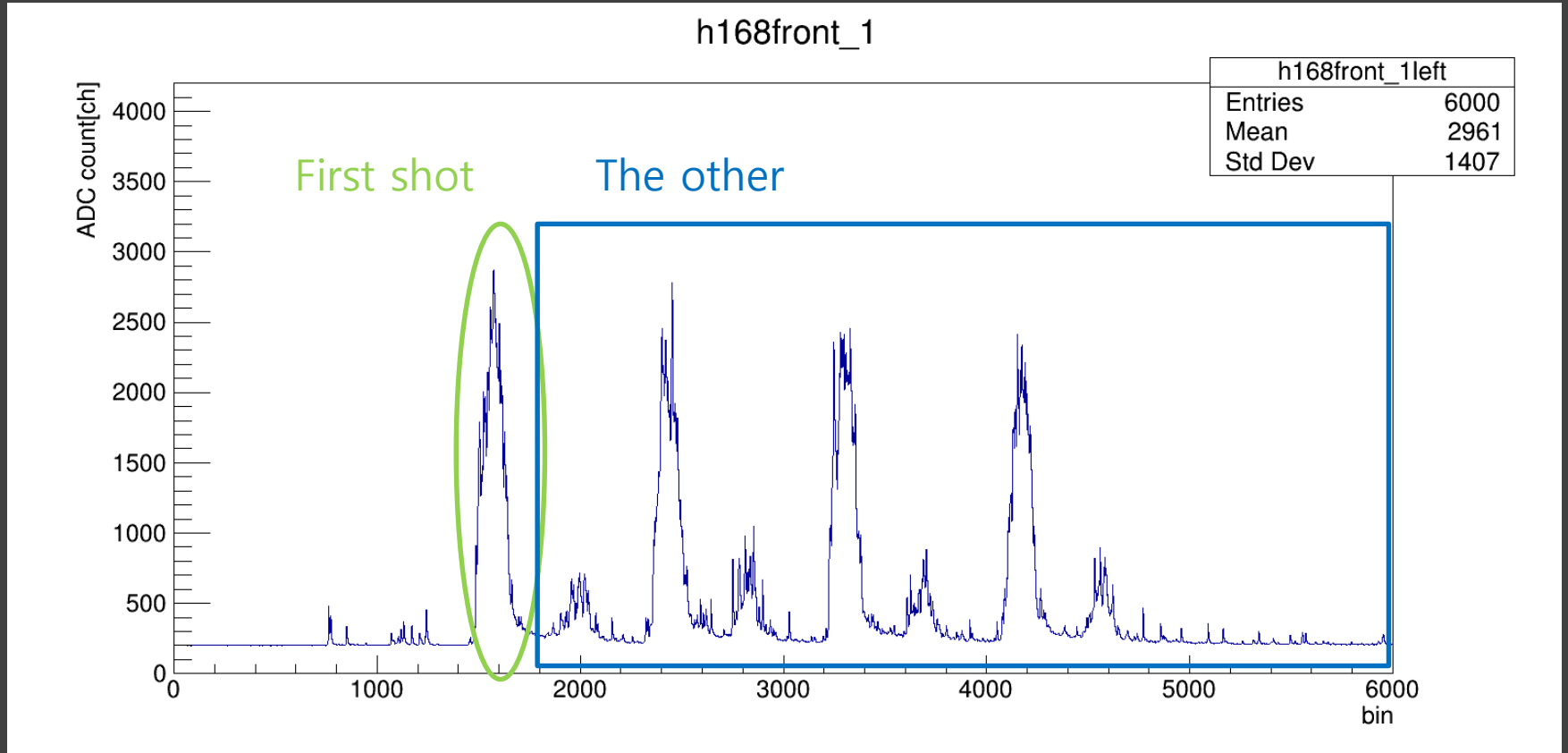


BeforeBin(BefBin)(0.1 height of first shot)



AfterBin(AftBin)(0.1 height of first shot)

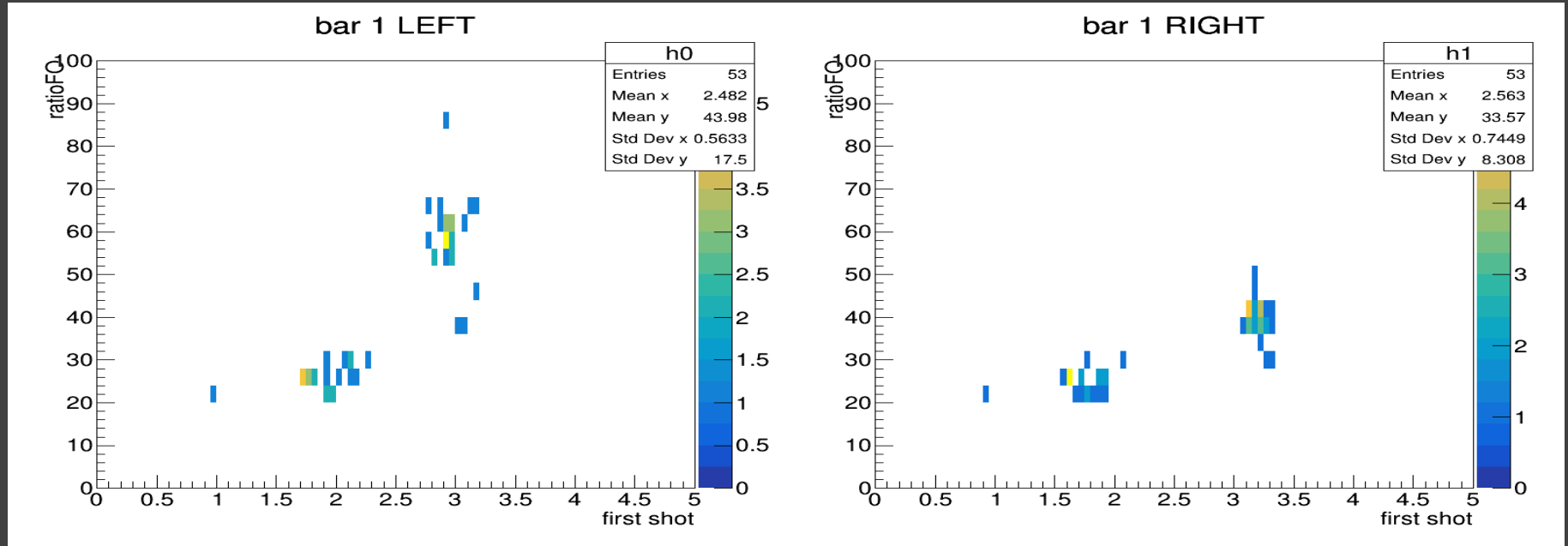
4 shots Event analysis(data 787)



Integral first shot(IntegF): BefBin to AftBin

Integral the other(IntegO): AftBin to EndBin(16000 bin)

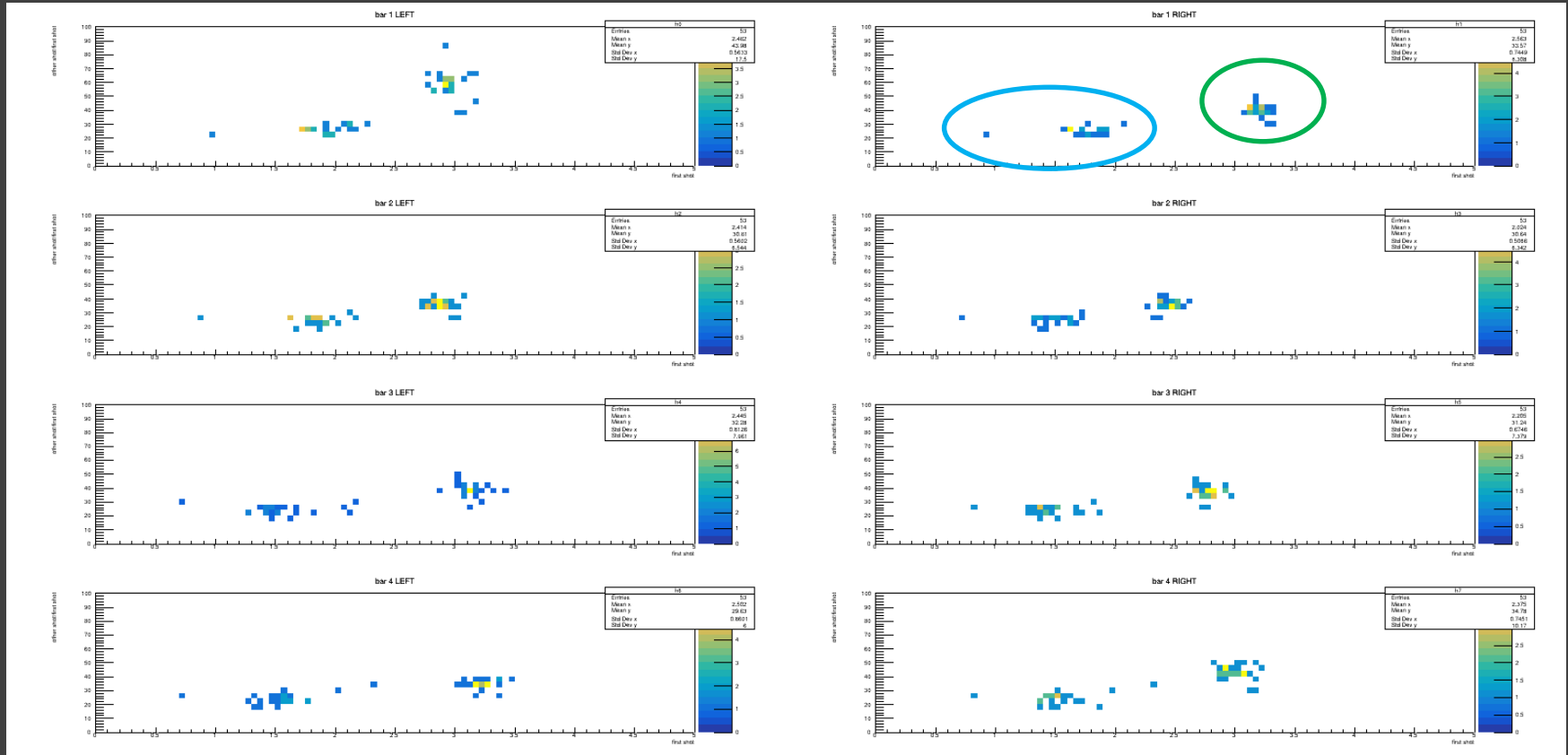
4 shots Event analysis(data 787)



X-axis : $\frac{MEPN \text{ of first shot}}{AftBin - BefBin}$ (for normalization)

Y-axis : $\frac{IntegF}{IntegO} * 100$ (= ratioFO)

4 shots Event analysis(data 787)

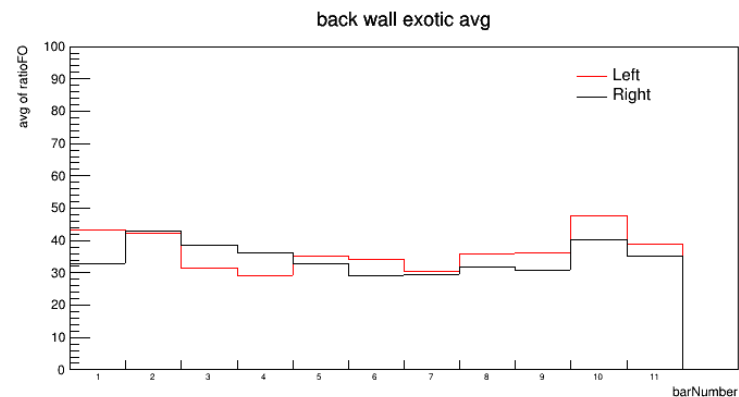
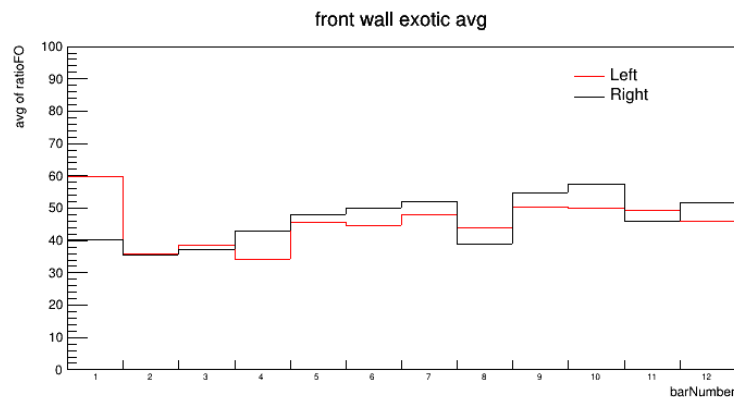
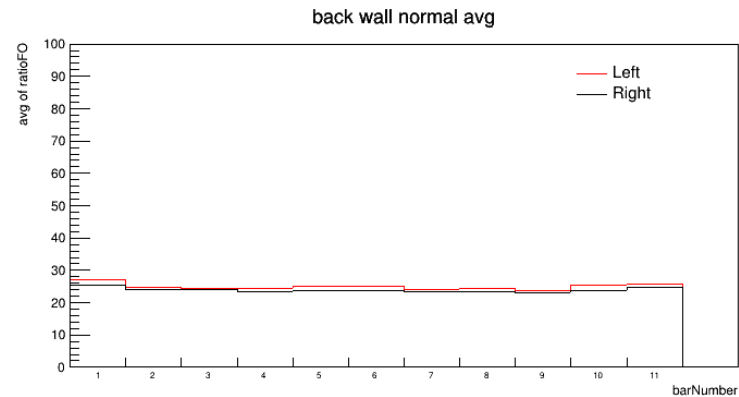
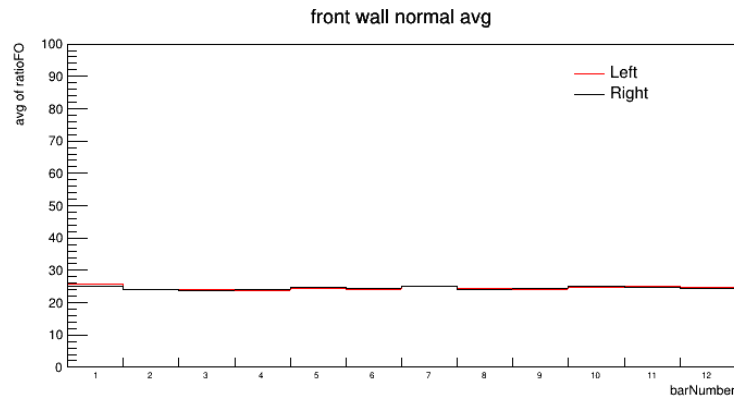


Low intensity of first shot(normal)



High intensity of first shot(exotic)

4 shots Event analysis(data 787)



In case of High intensity shot, average of ratioFO is different each PMT

To do list

- **PBAR Analysis**
 - Analysis tale events
 - PMT analysis
 - Front & back correlation