

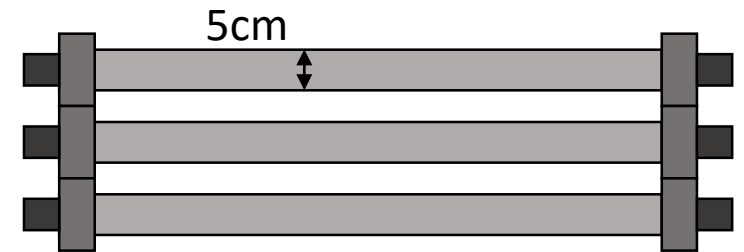
Weekly Meeting

19/02/2020

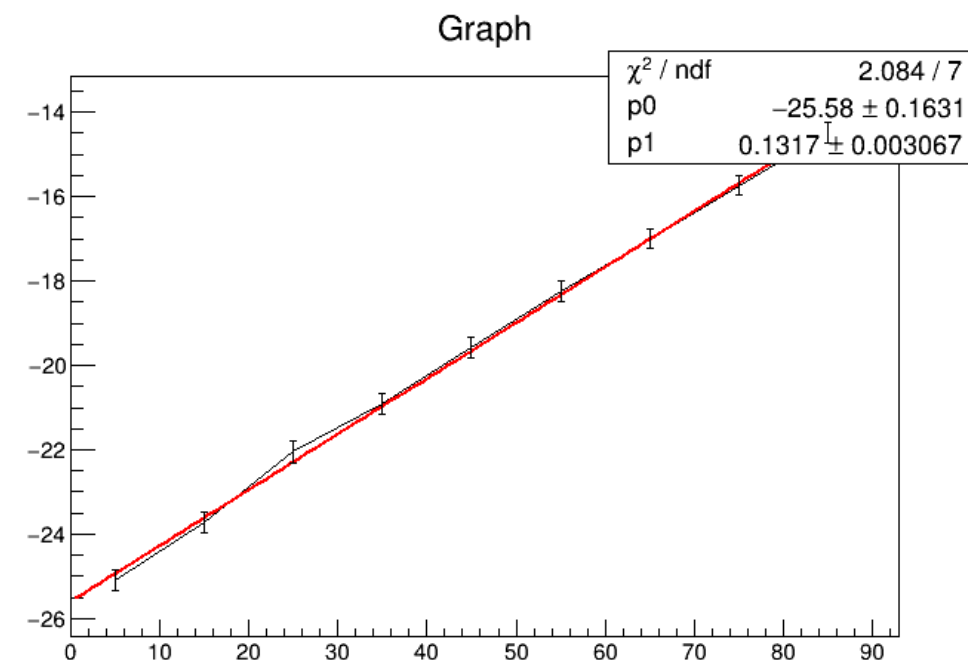
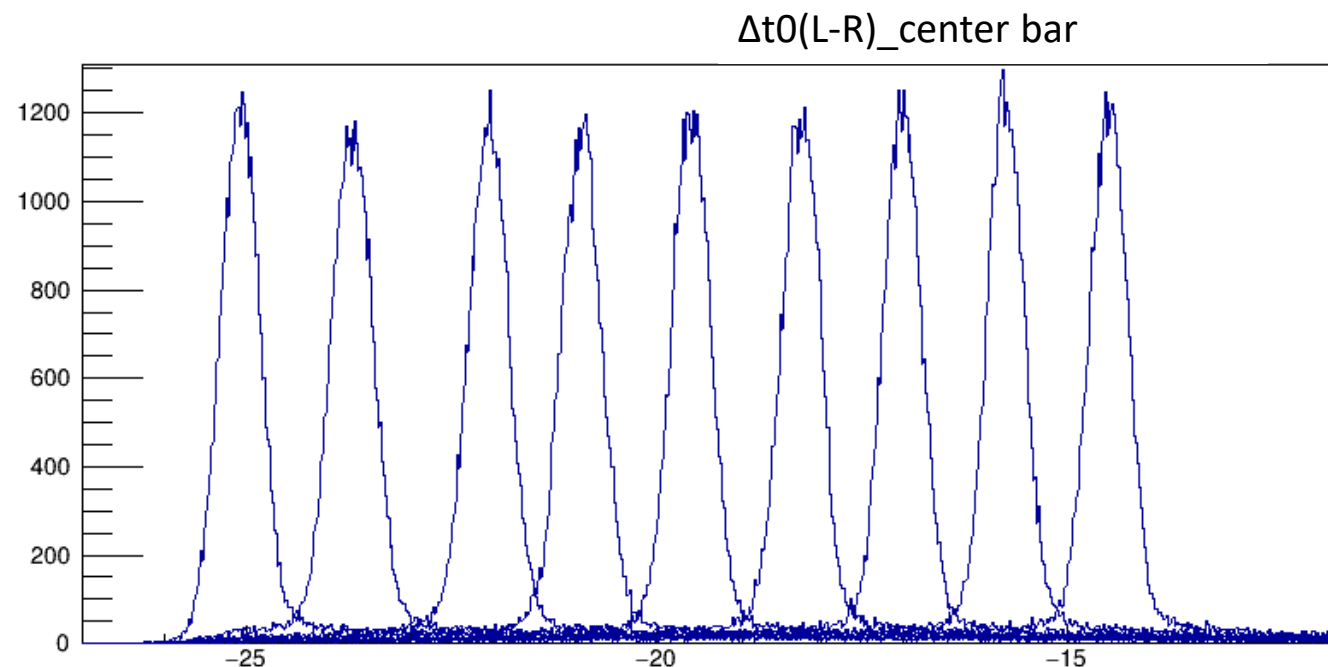
ByungChan Lee

Reviewer's comments

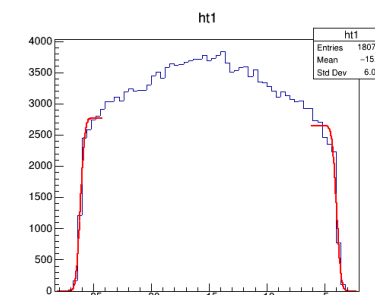
- Signal velocity
 - Position Dependence (13cm/ns ~ 16cm/ns)
 - Error estimation
- 5cm vs 10cm Time Resolution
 - Time resolution of reference time * $t0_ref = (t0_{avg}(1^{st} \text{ bar}) + t0_{avg}(3^{rd} \text{ bar}))/2$
 - Use the data of horizontally-oriented array (?)



Position dependence – Light Speed

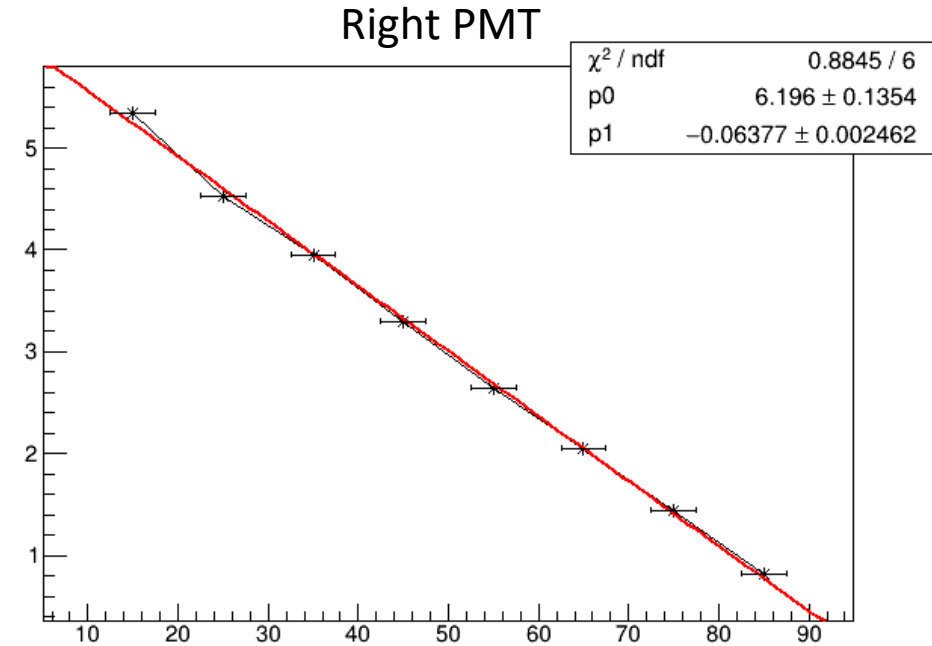
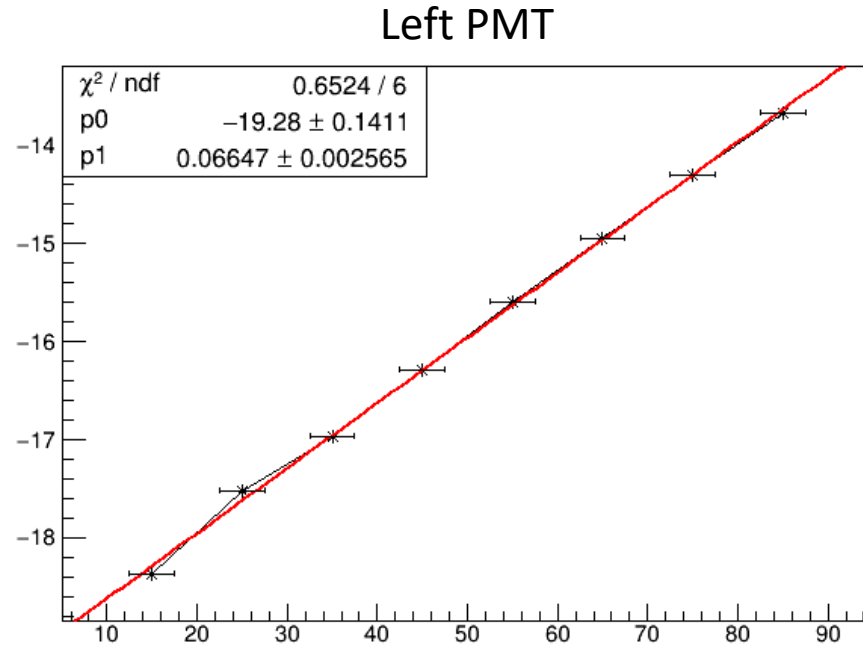


- $\Delta t_0(L-R)$ mean Graph
- Error : $\Delta t_0(L-R)$ sigma (gaussian fitting)
- Light Speed : 15.2 ± 0.4 cm/ns (from the previous method : 15.32 ± 0.01 cm/ns)



Position dependence – Light Speed

2020.01.15

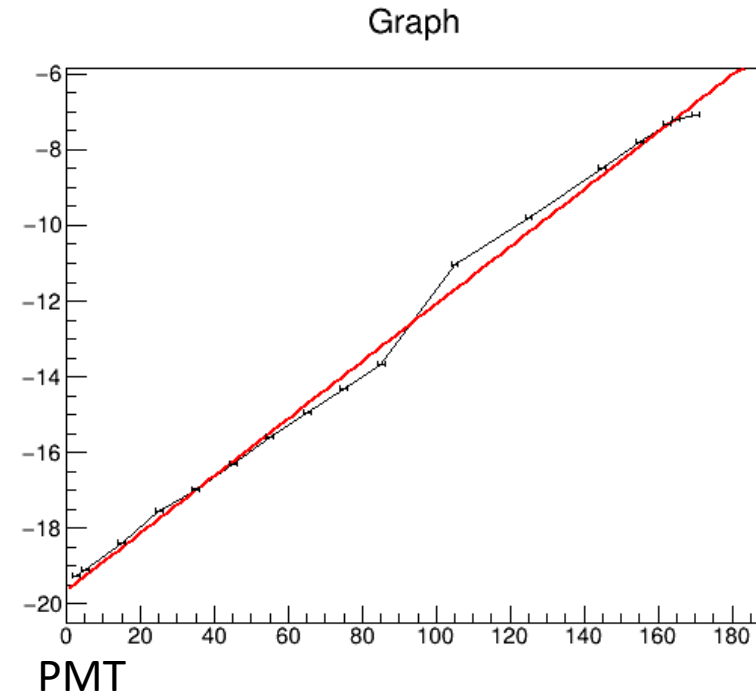
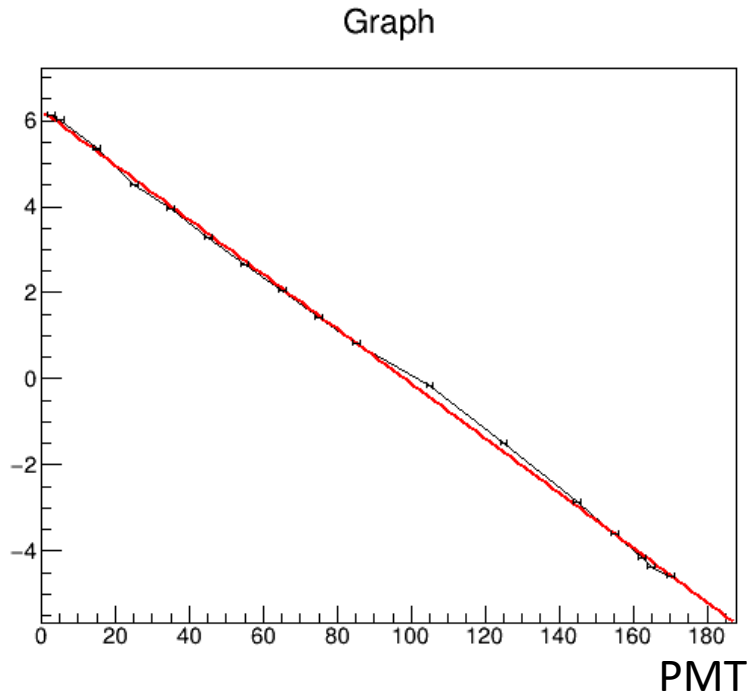


- Light Speed

Left PMT : 15.0 ± 0.6 cm/ns

Right PMT : 15.6 ± 0.6 cm/ns

Position dependence – Light Speed

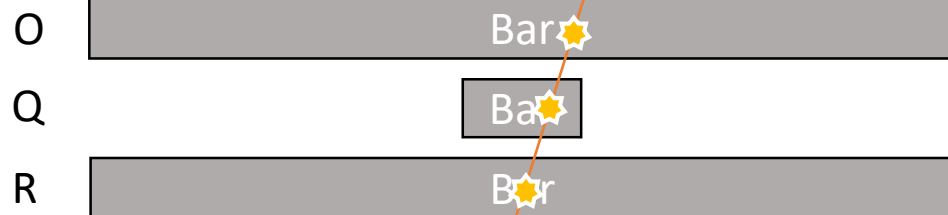


- Add 85cm~170cm data

Backup

DAQ setting (000~085)

Event rate = 0.3Hz or 1200/hour



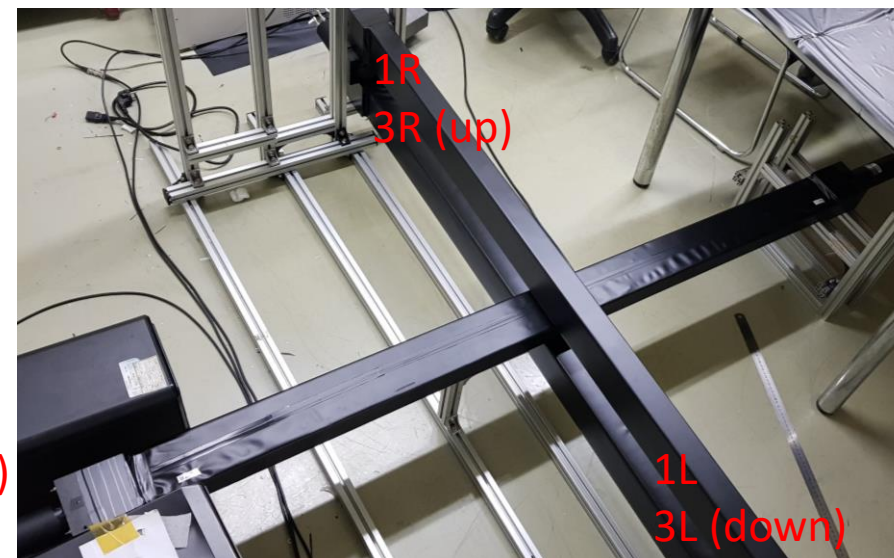
configuration

MTHRF 6
 CW 200 (ns)
 THR 100 (ADC counts)

HV setting (Calibration done at 85 ± 2.5 cm)

- 1L 1540
- 1R 1498
- 2L 1430
- 2R 1463
- 3L 1530
- 3R 1495

2L (channel)
 R (PMT)

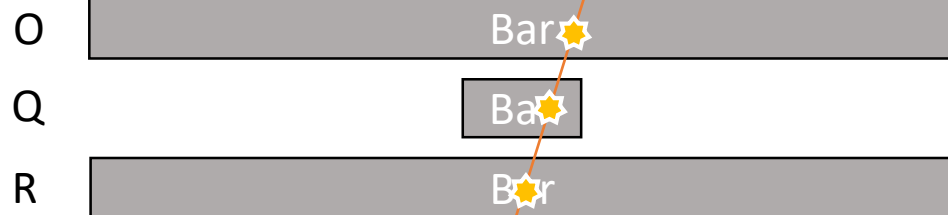


FADC module 13 (1L 1R 2L 2R), 14 (3L 3R)

- | | 13 | 14 |
|------------------------------|----|----|
| • ch1 calibration delay = 2 | | 4 |
| • ch2 calibration delay = 0 | | 3 |
| • ch3 calibration delay = 17 | | 20 |
| • ch4 calibration delay = 13 | | 16 |

DAQ setting (085~170)

Event rate = 0.3Hz or 1200/hour

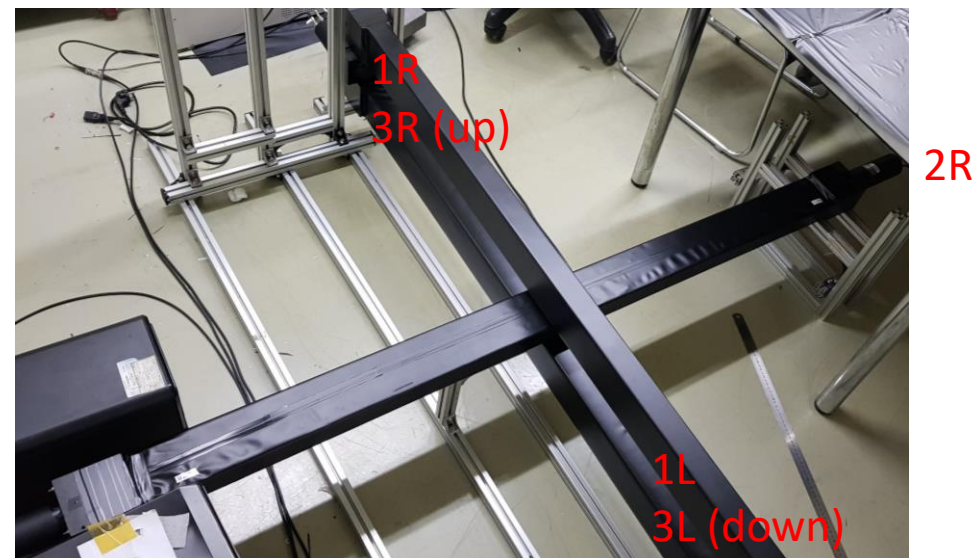


configuration

MTHRF 6
 CW 200 (ns)
 THR 100 (ADC counts)

HV setting (Calibration done at 85 ± 2.5 cm)

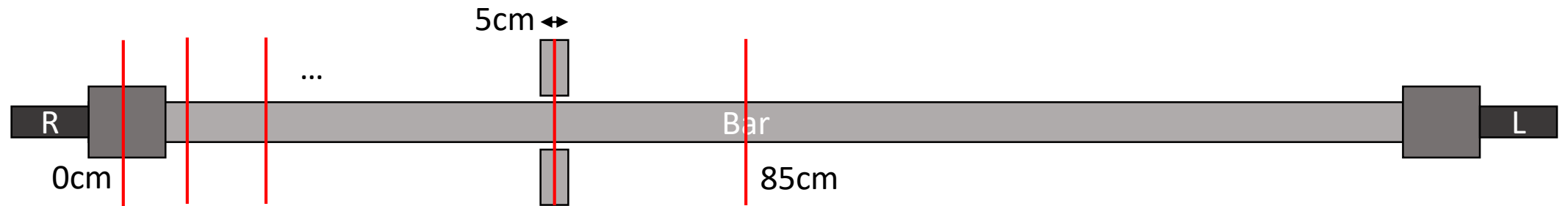
- 1L 1540
- 1R 1498
- 2L 1463
- 2R 1430
- 3L 1535
- 3R 1520



FADC module 13 (1L 1R 2L 2R), 14 (3L 3R)

- | | 13 | 14 |
|------------------------------|----|----|
| • ch1 calibration delay = 2 | | 4 |
| • ch2 calibration delay = 0 | | 3 |
| • ch3 calibration delay = 17 | | 20 |
| • ch4 calibration delay = 13 | | 16 |

Position dependence



- Data taken from **2.5cm**(± 2.5 cm), **5cm**(± 2.5 cm), **15cm**(± 2.5 cm), ..., **85cm**(± 2.5 cm)