

WARP simulation

hep2011

- OS : CentOS5 → CentOS7
- CPU : Intel® Xeon® Processor E5-2620 v2 @ 2.10 GHz × 24
- RAM : 16GB
- Mem Avail : ~ 2.2TB

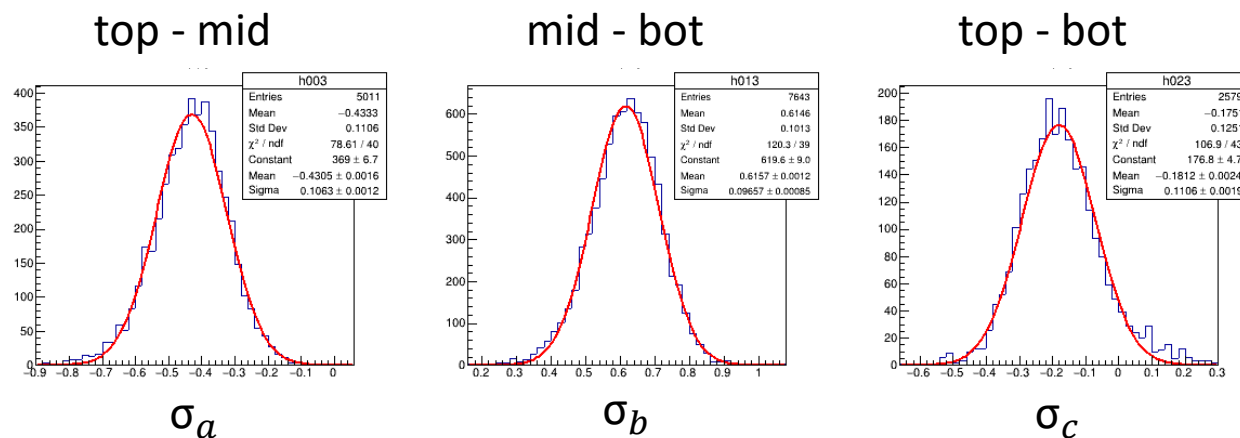
** UNIST

- CPU : 32 core
- Extraction : 3 ~ 40 min/script ~250MB
- Warp installation is in process..

Time Resolution 5cm vs 10cm

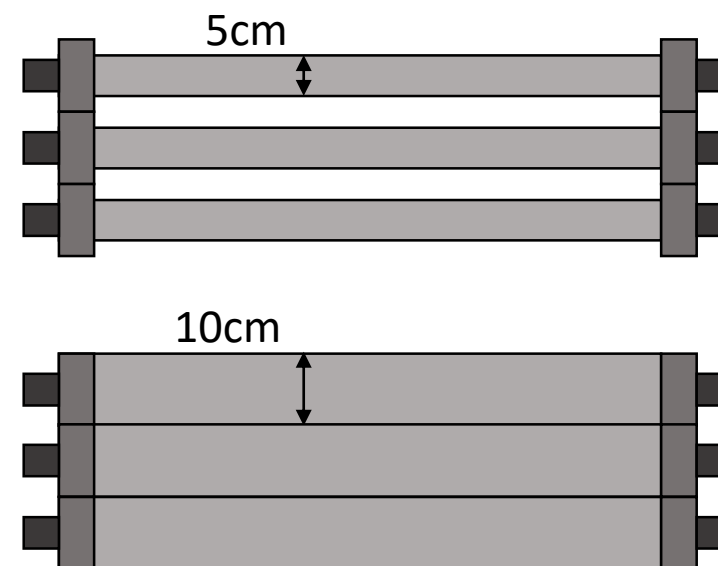
Calculation Method

- $t_{\text{avg}}(\text{top}) - t_{\text{avg}}(\text{mid}) \dots$
- $\sigma_1 = \sqrt{(\sigma_a^2 - \sigma_b^2 + \sigma_c^2)/2} \dots$



Configuration and Event selection

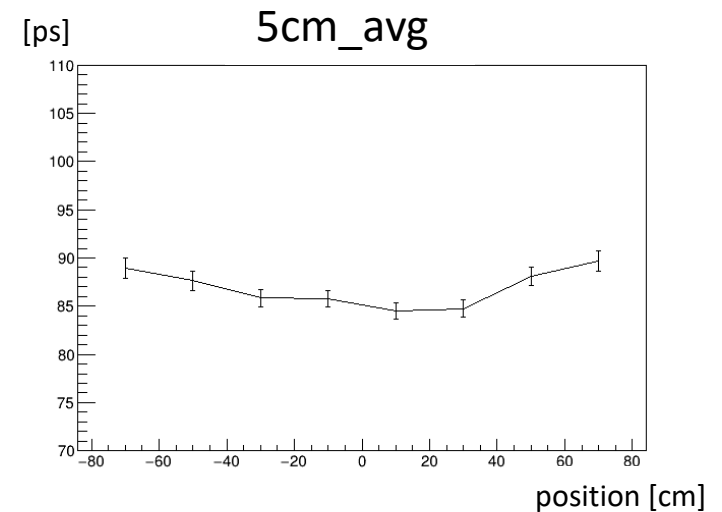
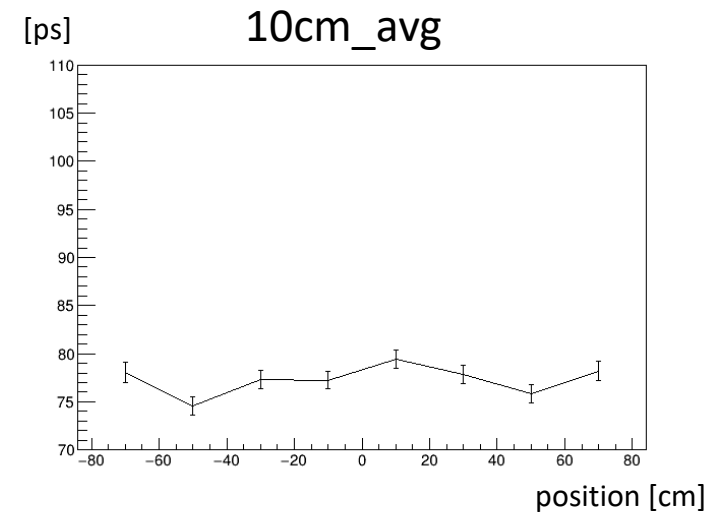
- Bar : G, H, F
- # of events : 100,000
- Coincidence : 3 Bars offline analysis
- Threshold : 100 ADC counts ($\sim 3\text{MeV}$) $\rightarrow$ 200 ($\sim 5\text{MeV}$)
- Position : -80cm $\sim$ 80cm, 8 divisions (20cm each)
- Angle : $\Delta x/\Delta y < 0.75$ ($\cos\theta > 0.8$)



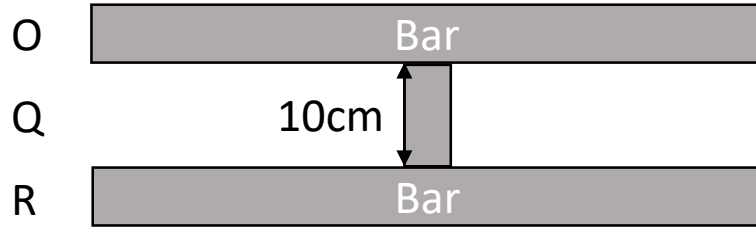
Time Resolution 5cm vs 10cm

10cm	Time Resolution [ps]
Top	83 ± 1
Mid	68 ± 2
Bot	81 ± 2
average	77 ± 1
5cm	
Top	89 ± 2
Mid	81 ± 2
Bot	90 ± 2
average	87 ± 1

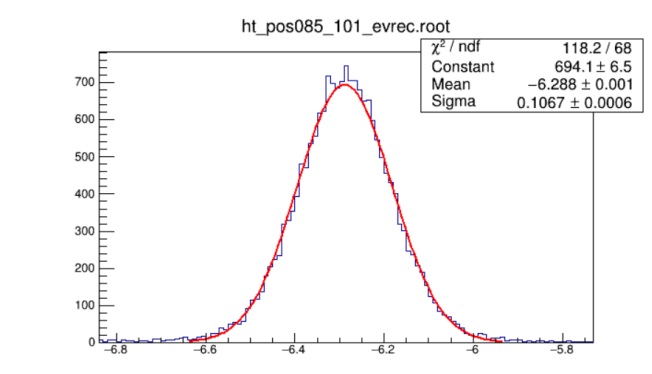
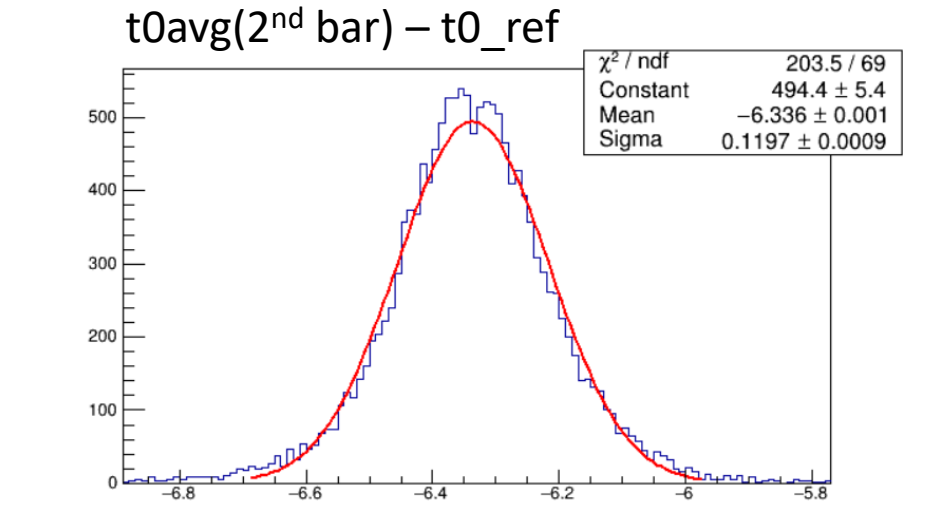
- Ratio (10cm / 5cm) = 1.13 (Average)



Time Resolution 5cm vs 10cm



- # of events : 30,000
- dt cut : Δt_0 (Left – Right) < 1 sigma (top, mid, bot)
- Position : $85\text{cm} \pm 2.5\text{cm}$ / $85\text{cm} \pm 5\text{cm}$
- Sigma : 120ps / 107ps
- ** Ratio of sigma = 1.12
- chisqr/ndf : 2.95 / 1.74



prev data
(5cm)