

# The Resolution with Gate

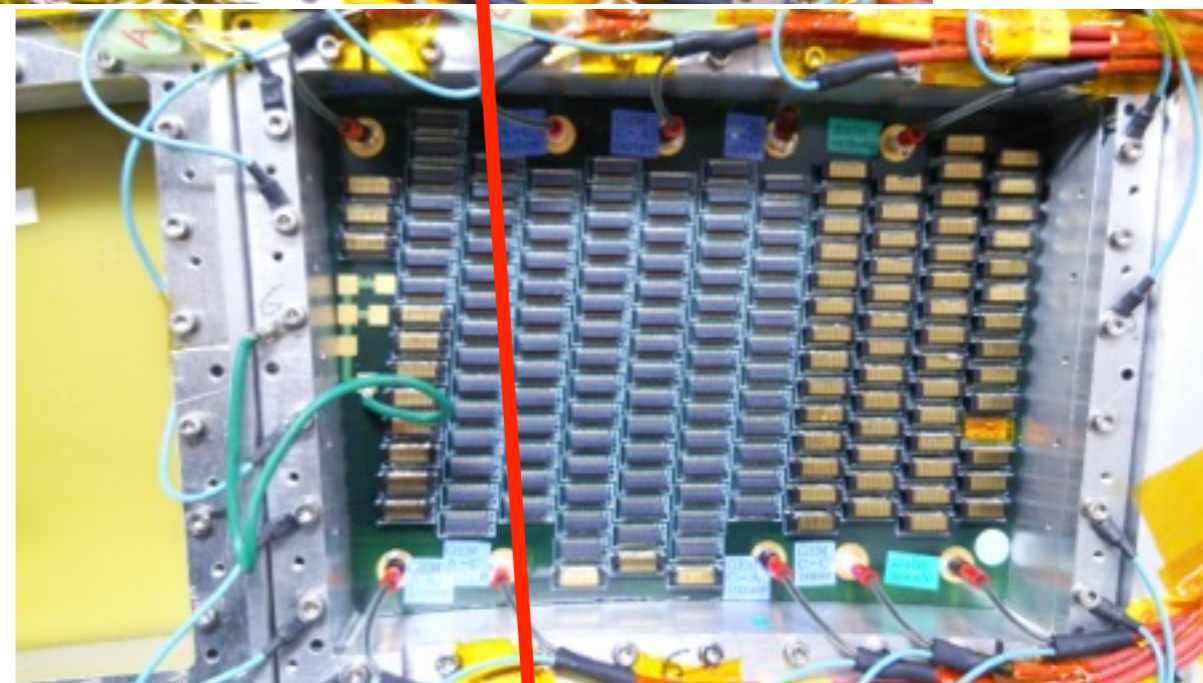
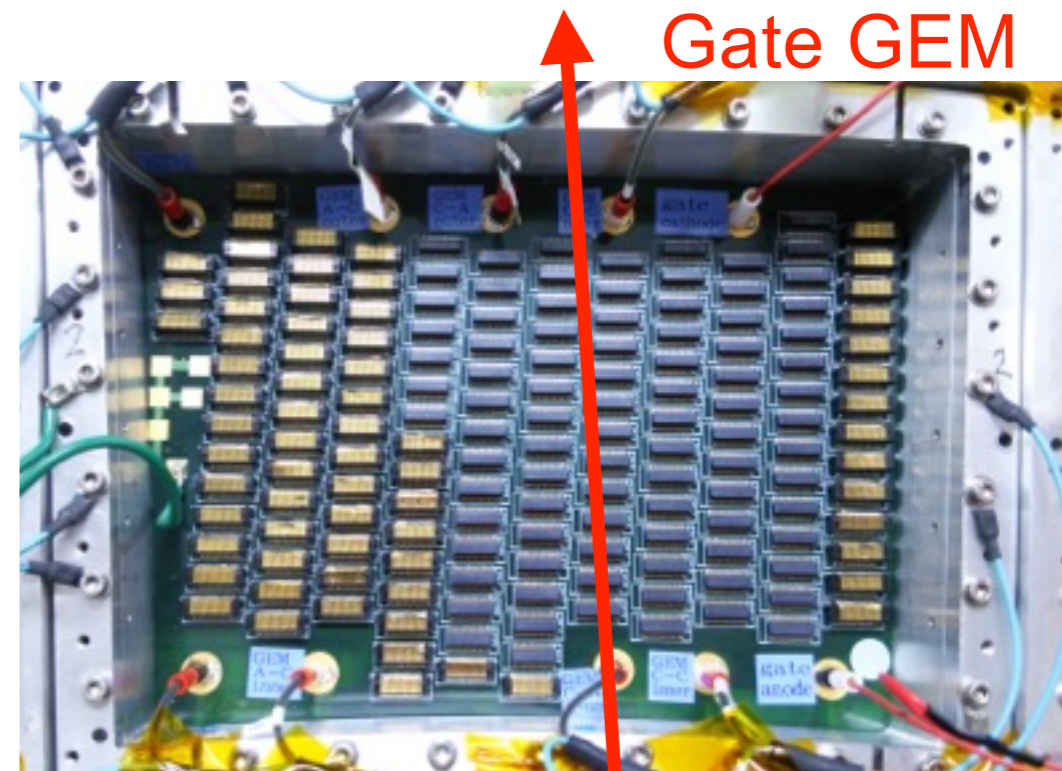
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# Setting

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- 1 T
- 5 GeV
- Position
  - Horizontal  $-170 \sim 370$
  - Rotate 0.56
  - Vertical 217
- Z scanning



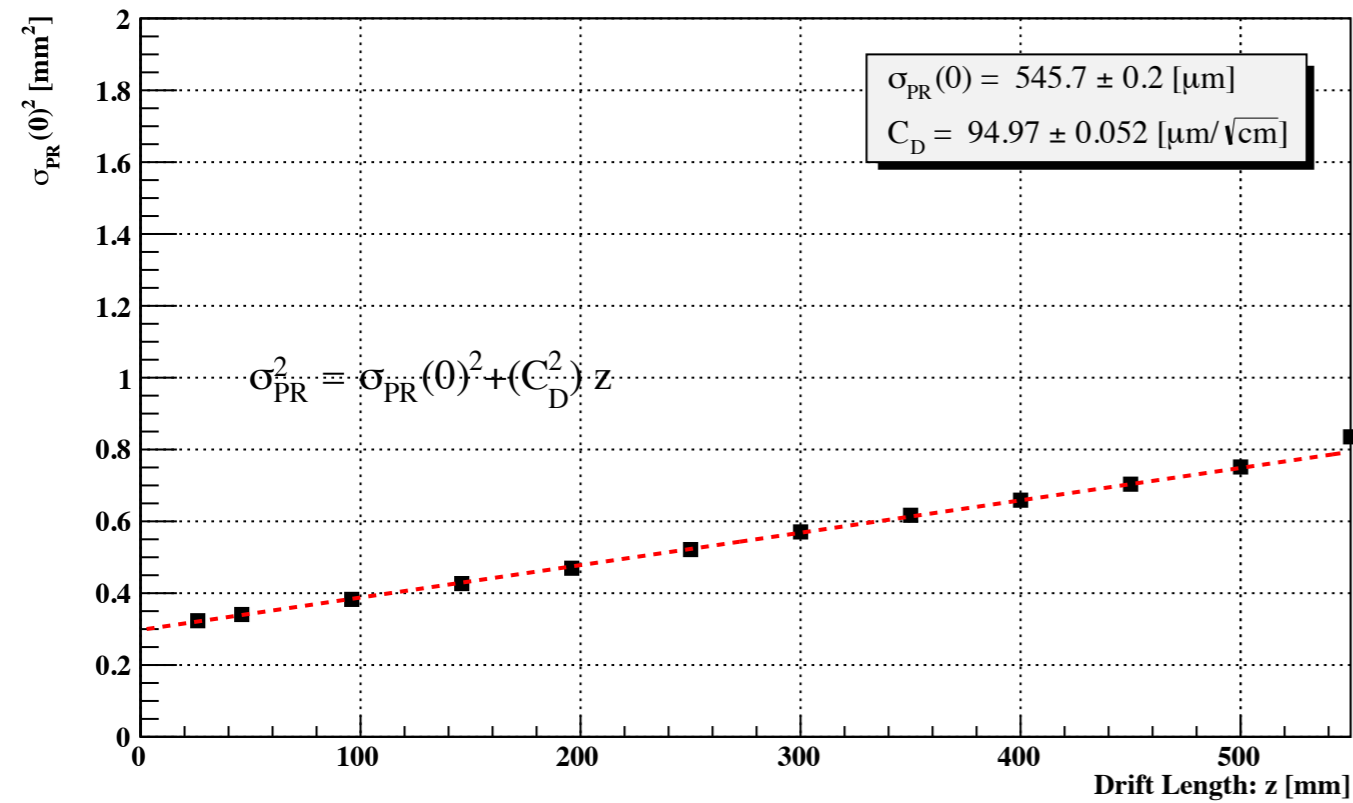
Field Shaper

# Pad Response

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## Gate GEM

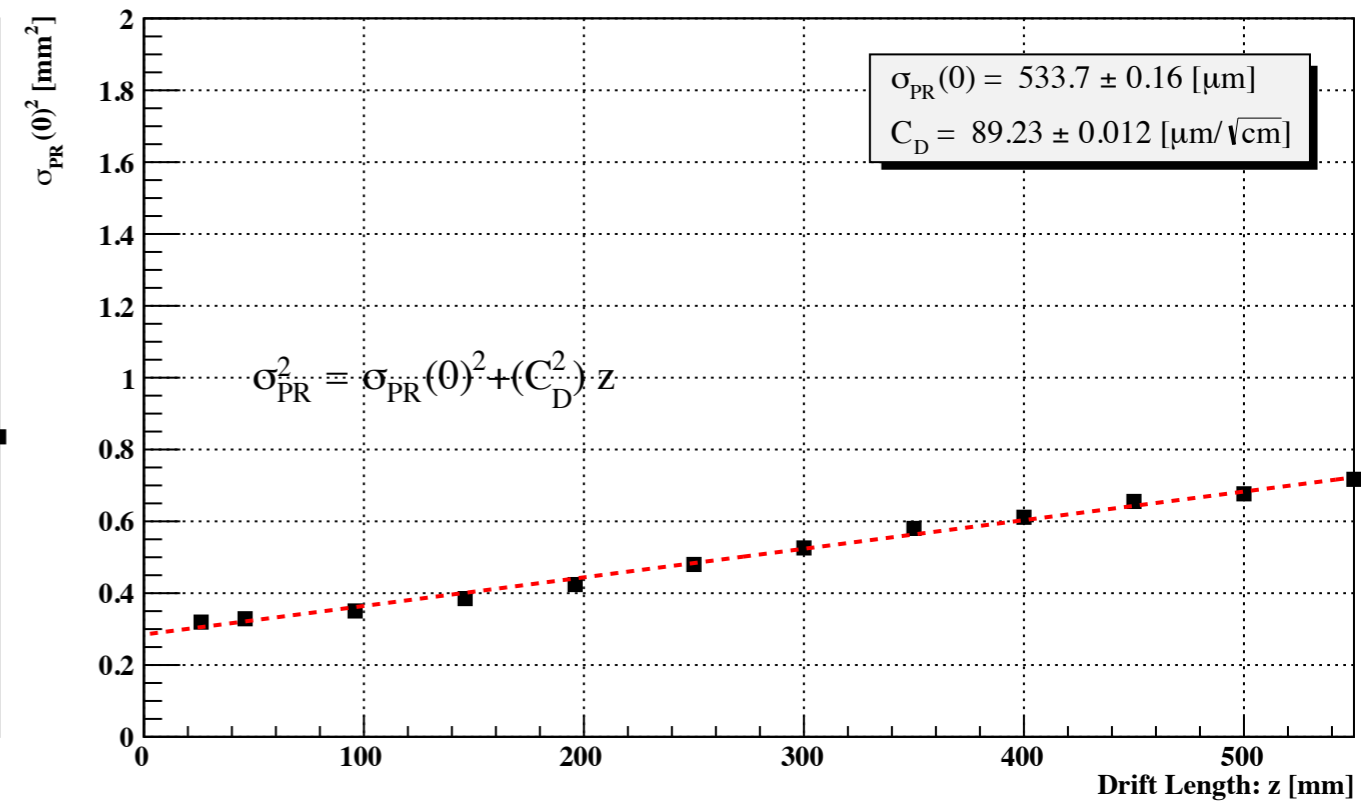
### Pad Response (Row46)



$$C_D = 94.97 \pm 0.052 \text{ } \mu\text{m}/\sqrt{\text{cm}}$$

## Field Shaper

### Pad Response (Row19)

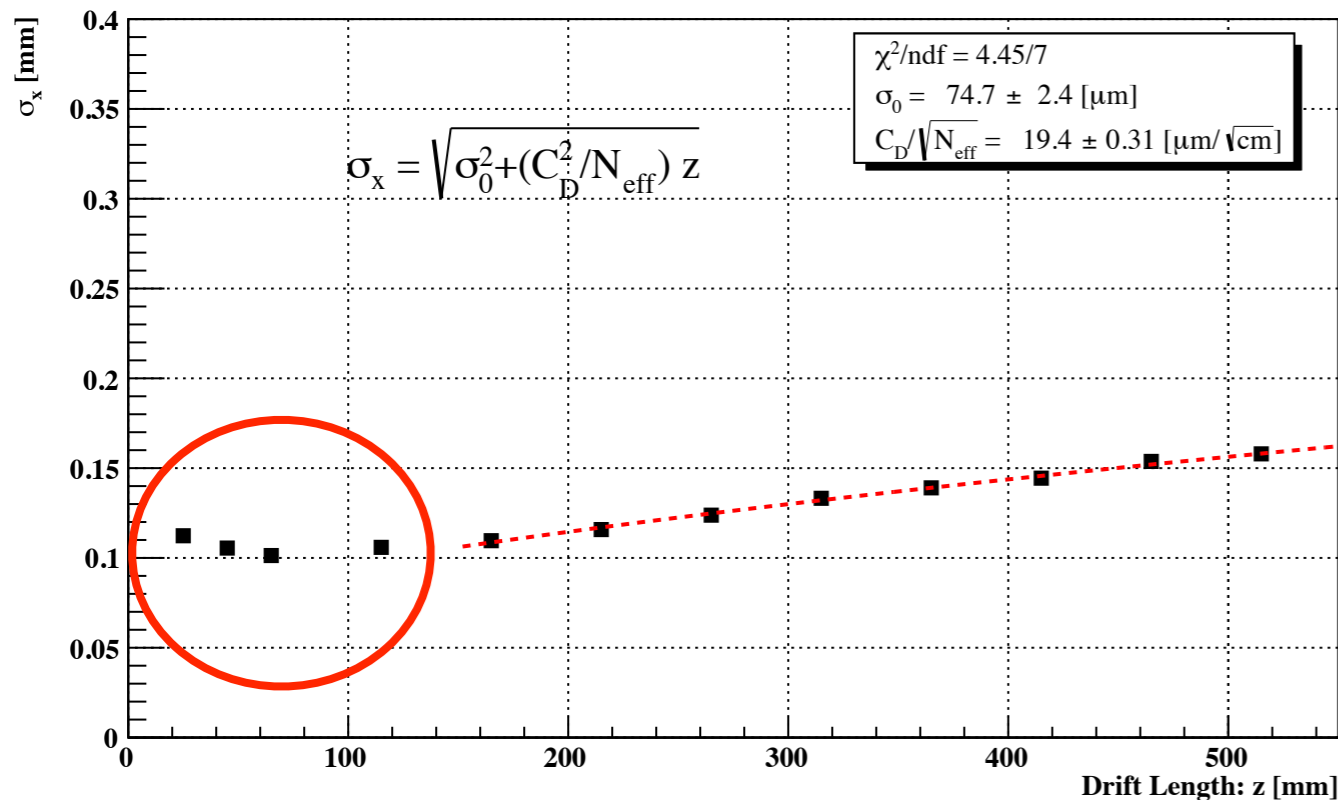


$$C_D = 89.23 \pm 0.012 \text{ } \mu\text{m}/\sqrt{\text{cm}}$$

# Resolution

## Gate GEM

GM Resolutin (Row46)



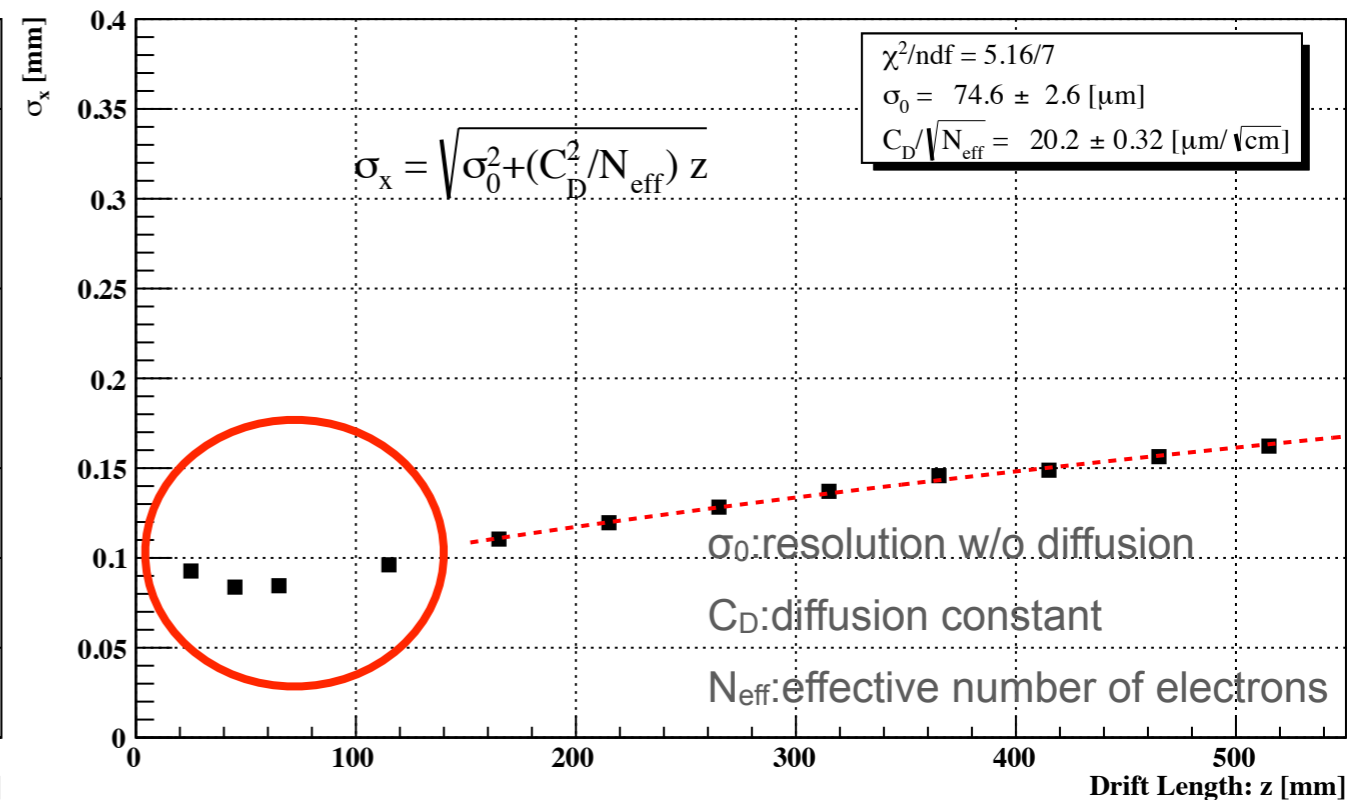
$\sigma_0 = 74.7 \pm 2.4 \text{ \mu m}$

$C_D/\sqrt{N_{\text{eff}}} = 19.4 \pm 0.31 \text{ \mu m/\sqrt{cm}}$

if  $C_D = 95 \text{ \mu m/\sqrt{cm}}$   
 $N_{\text{eff}} = 24.0$

## Field Shaper

GM Resolutin (Row17)



$\sigma_0 = 74.6 \pm 2.6 \text{ \mu m}$

$C_D/\sqrt{N_{\text{eff}}} = 20.2 \pm 0.32 \text{ \mu m/\sqrt{cm}}$

$N_{\text{eff}} = 19.5$

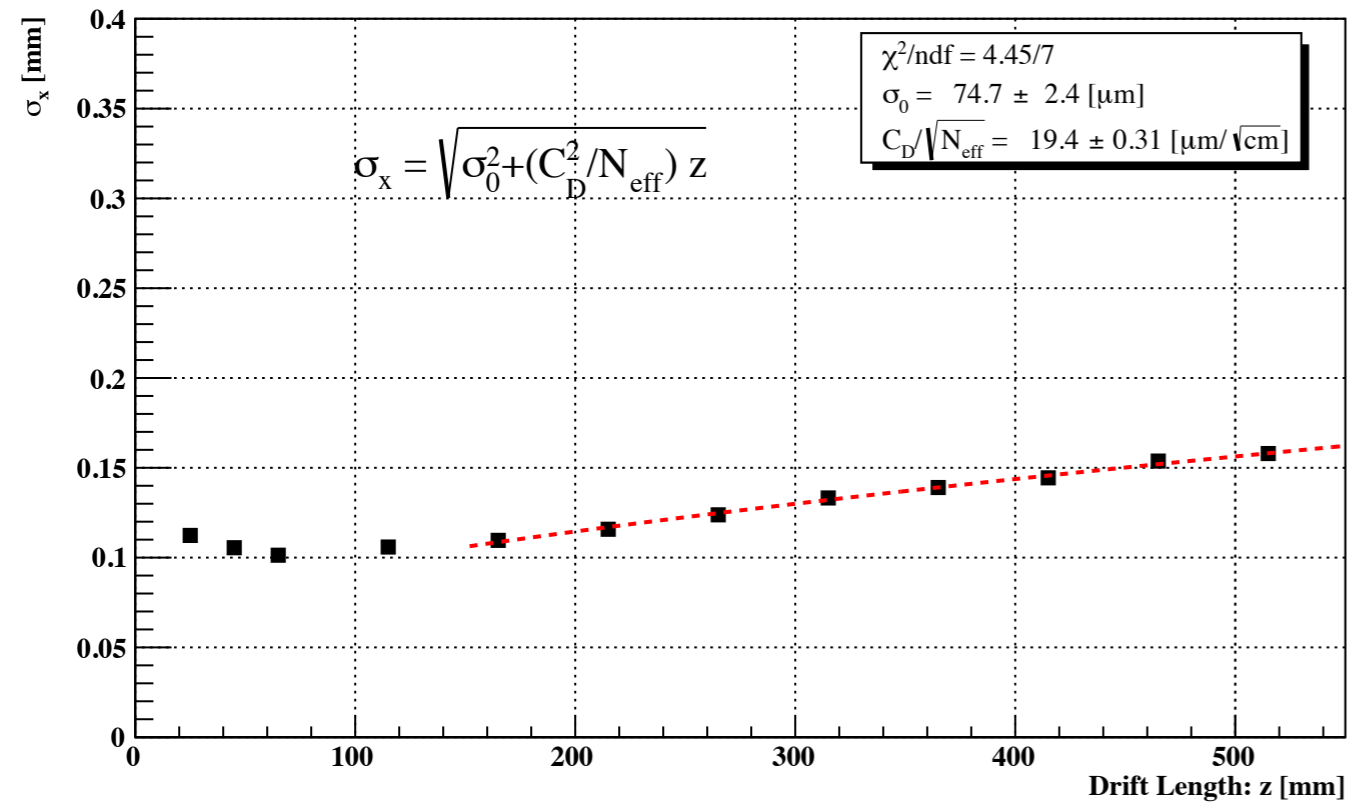
- The resolution of gate GEM is a little better than that of field shaper
- Under 120 mm of drift length, the field shaper one is better

# Resolution (compare with 2010,2012)

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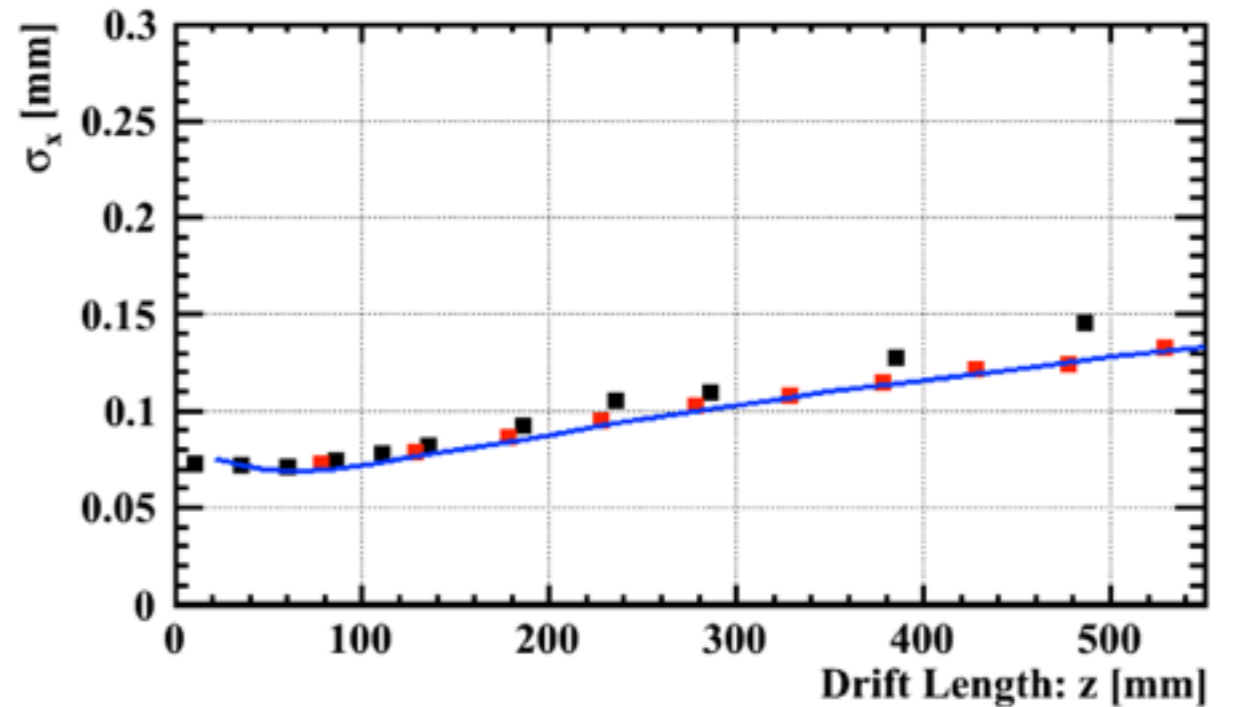
## Gate GEM(2016)

### GM Resolutin (Row46)



2010

2012



➤  $\sigma_x$  is bigger than past data

# Summery

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- The difference of gateGEM and field shaper is not clear
- Compare with past data,  $\sigma_x$  is bigger
- We plan to replace gate GEM with field shaper
- We are going to check our analysis

Thank you for listening

# Backup

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- ▶ Drift velocity