

# Status Report #20

2020. 03. 25 (Wed)

B4 FUJIWARA Tomomasa

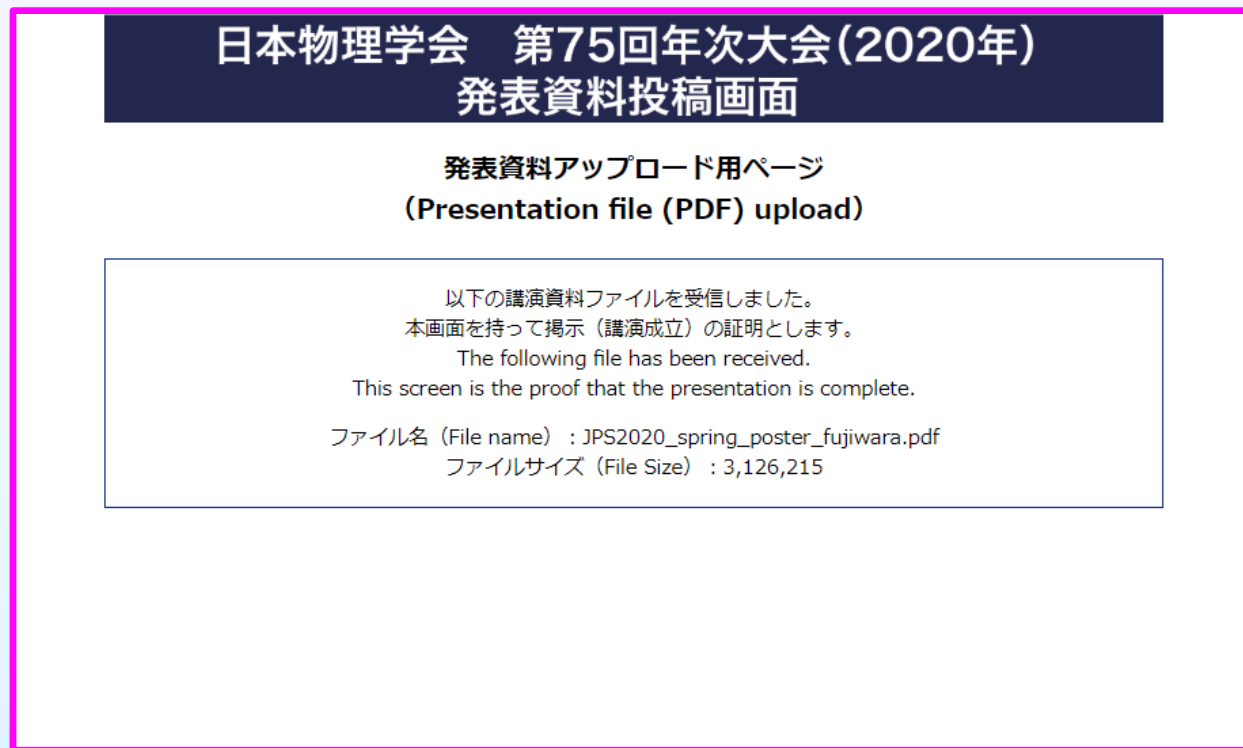
✓ ToF: consideration for size dependence

✓ B4 presentation: done

✓ JPS poster: submission]

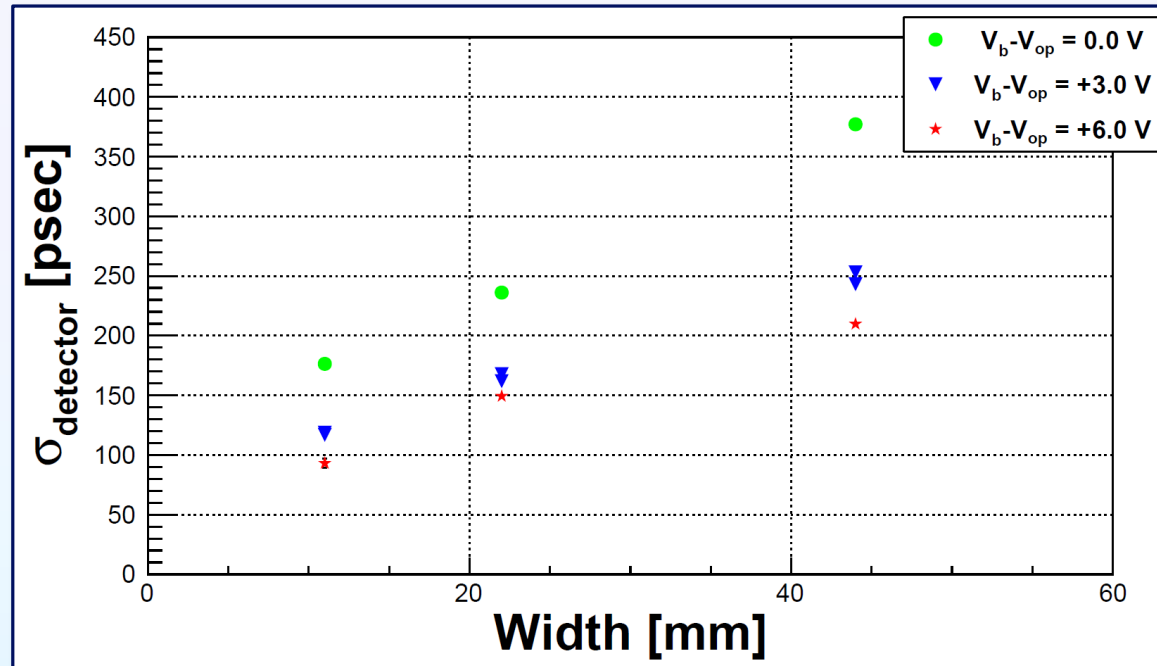
完成版: wikiにあげました. ([http://lambda.phys.tohoku.ac.jp/~db/mediawiki/images/6/60/JPS2020\\_spring\\_poster\\_fujiwara.pdf](http://lambda.phys.tohoku.ac.jp/~db/mediawiki/images/6/60/JPS2020_spring_poster_fujiwara.pdf))

- コメント等本当にありがとうございました.

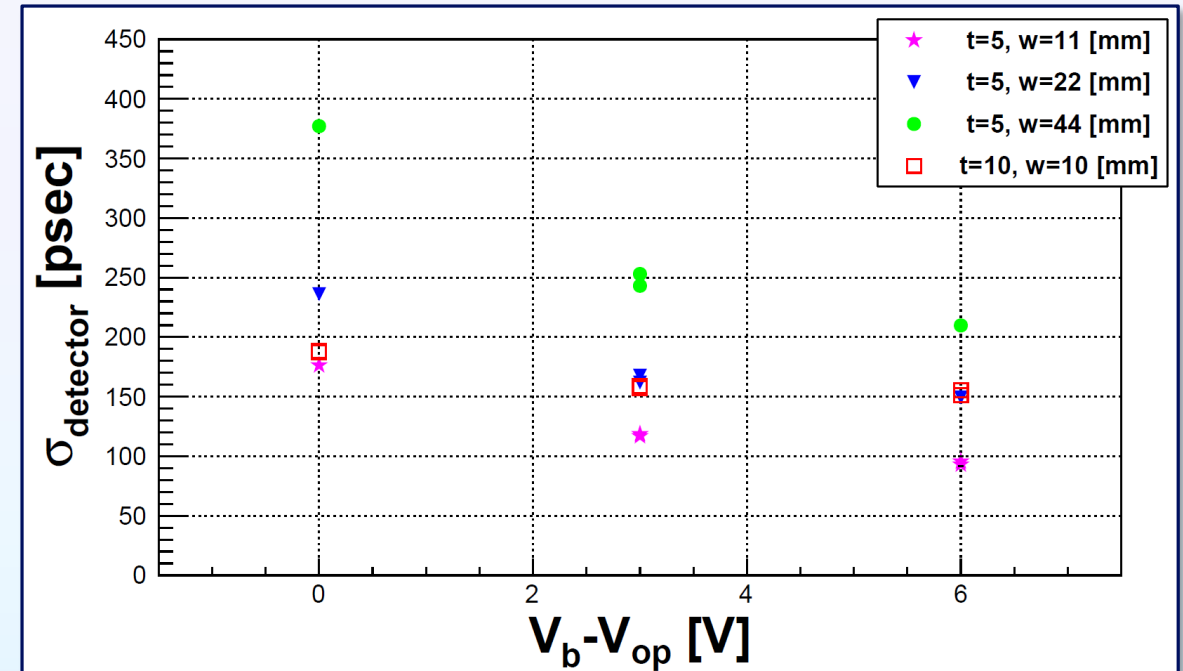


What I want to do: **Evaluate the effects for  $\sigma_{\text{detector}}$**

✓ Width dependence ( $t=5$  mm)



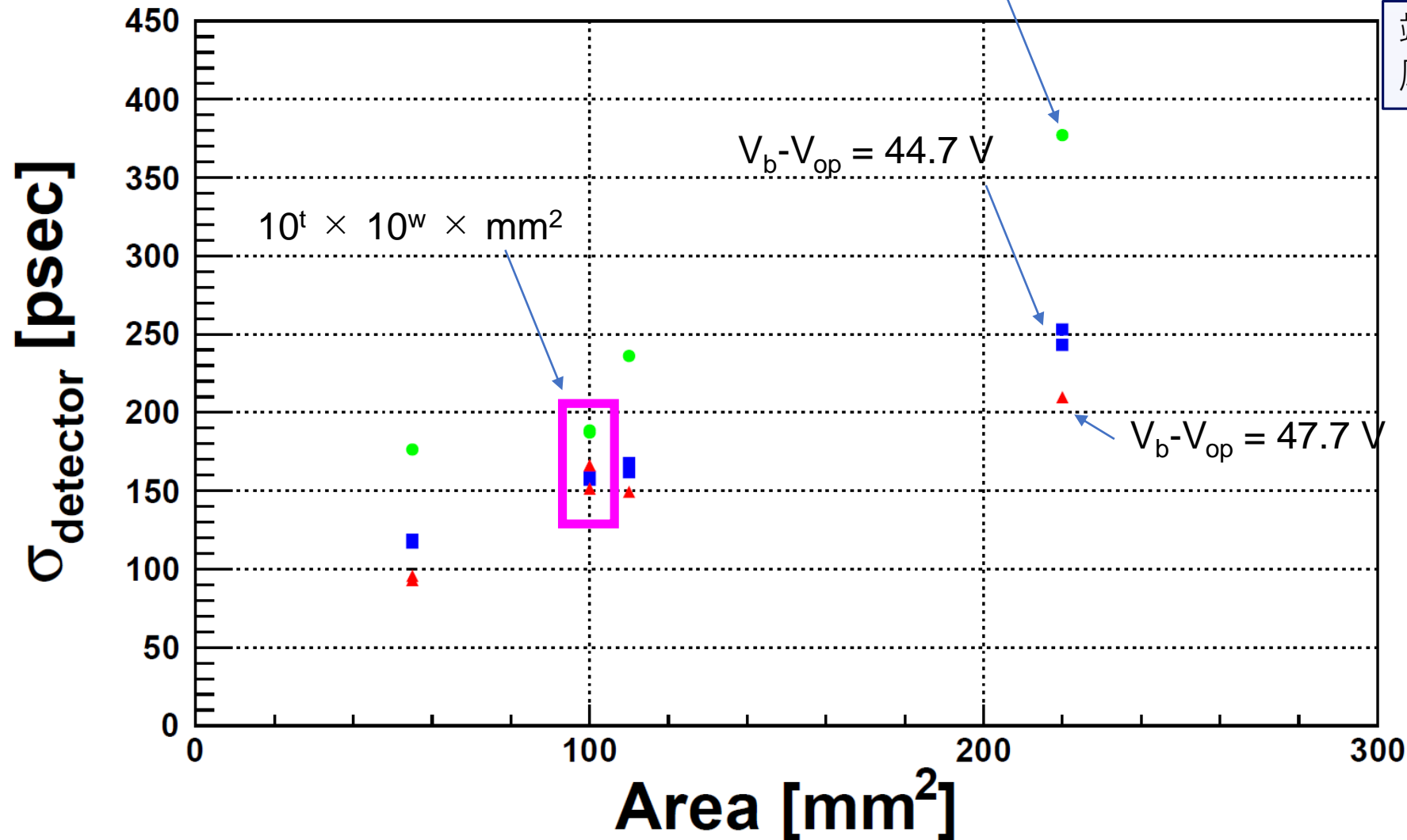
✓ Bias dependence (for various width)



✓ Area (端面の面積) dependence

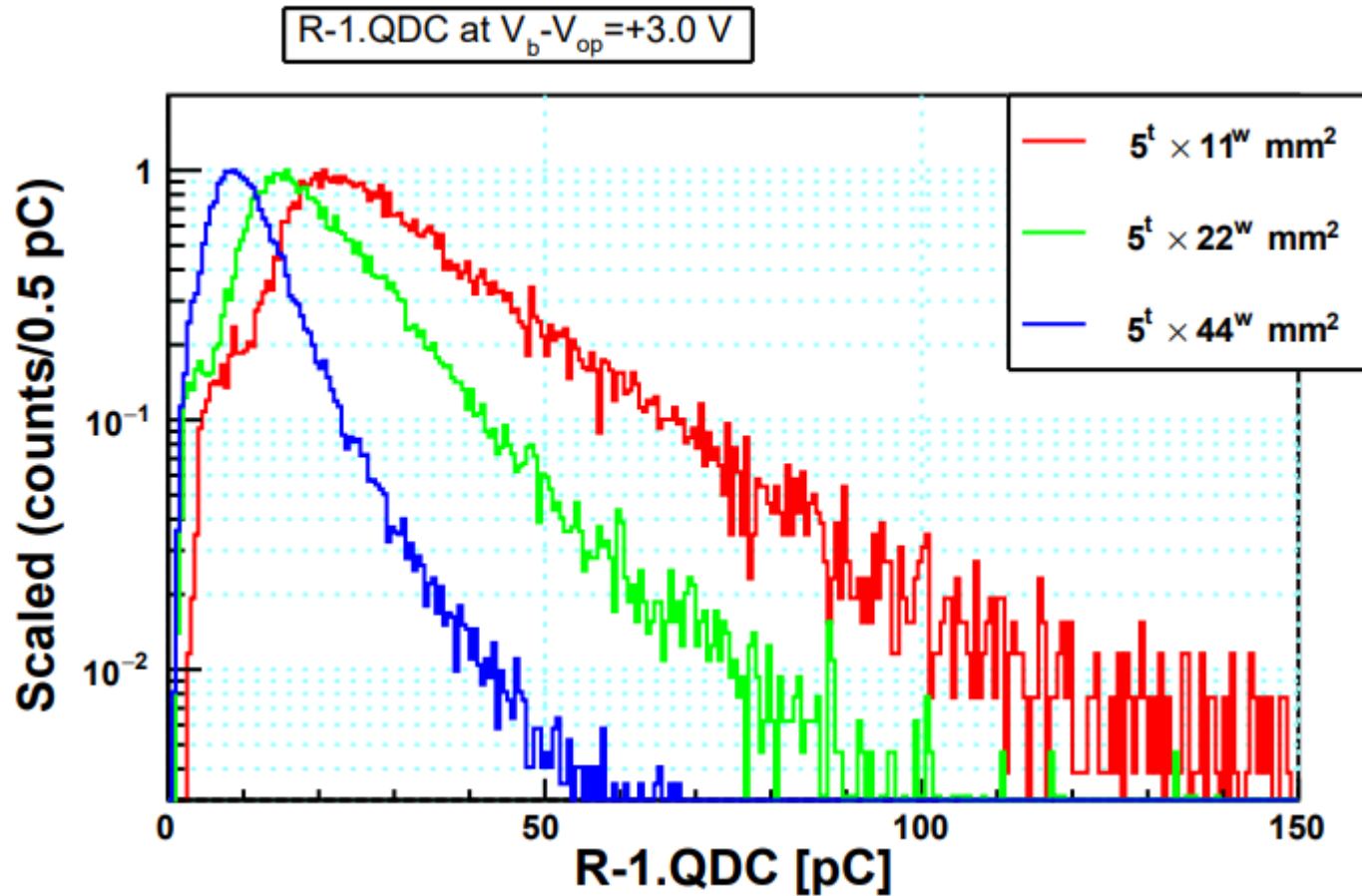
$$V_b - V_{op} = 41.7 \text{ V}$$

- Only the case of  $10^t \times 10^w \times \text{mm}^2$   
They indicate difference tendency.



端面の面積よりも  
厚さや幅の方が支配的といえる

- ✓ Comparison QDC distribution for various width (11 — 44 mm )



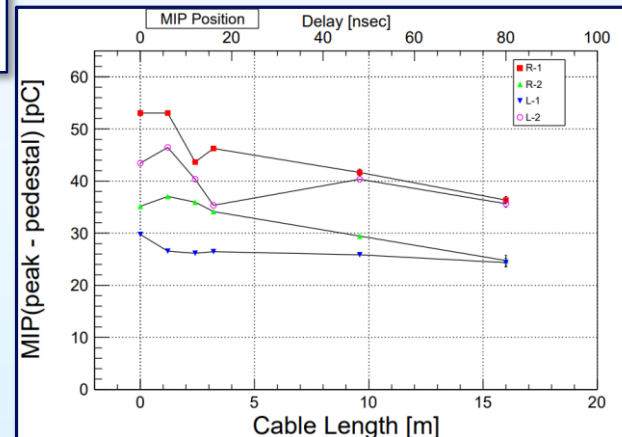
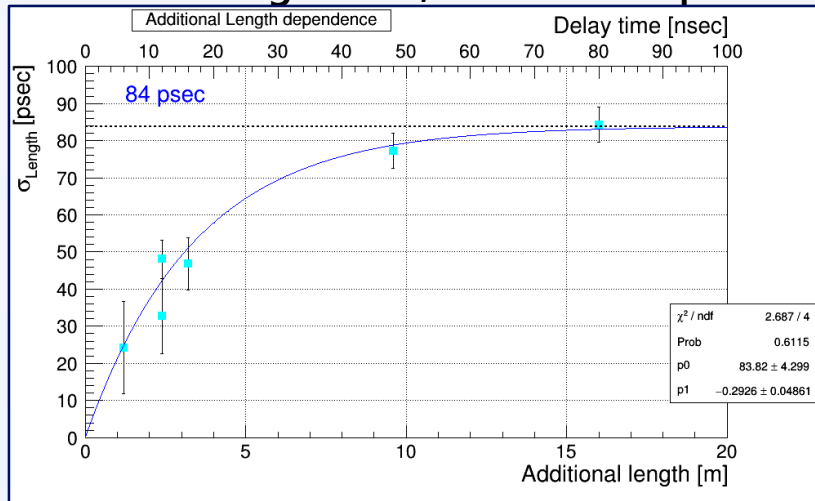
Slightly decrease gain.

- ⇒ To evaluate MIP(gain) vs.  $\sigma_{\text{detector}}$
- ⇒ How to define gain of each MPPC ?
- ⇒ Set standard value, evaluate the ratio (not yet)

✓ Evaluate gain vs,  $\sigma_{\text{detector}}$  (width & cable length)

✓ Test readout method. (Series or parallel)

⇒ soldering MPPC, resistor & capacitors



Back up

$\sigma_{\text{detector}}$  [psec]

