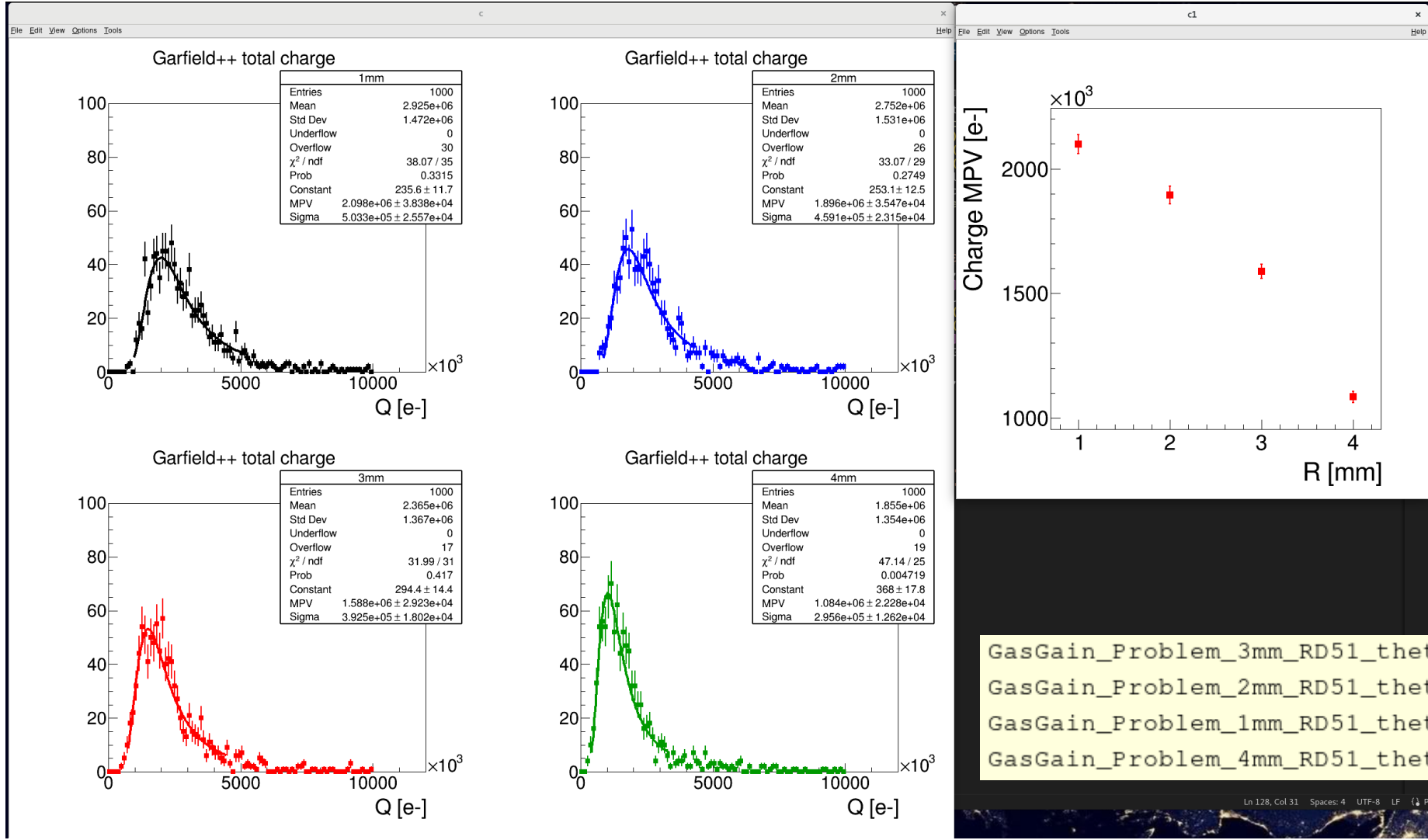


Sonja: gasgain_total_charge

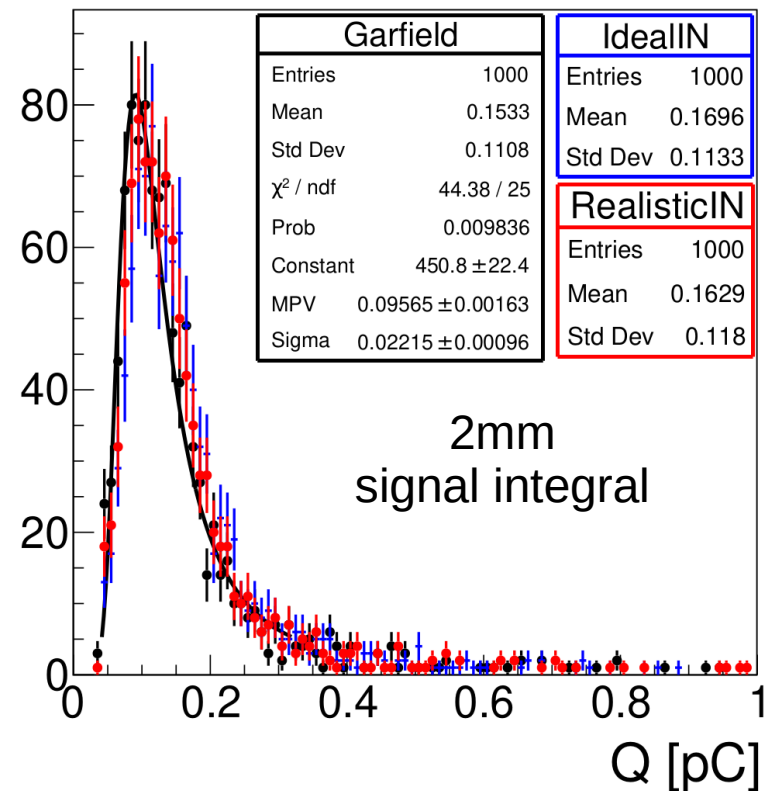
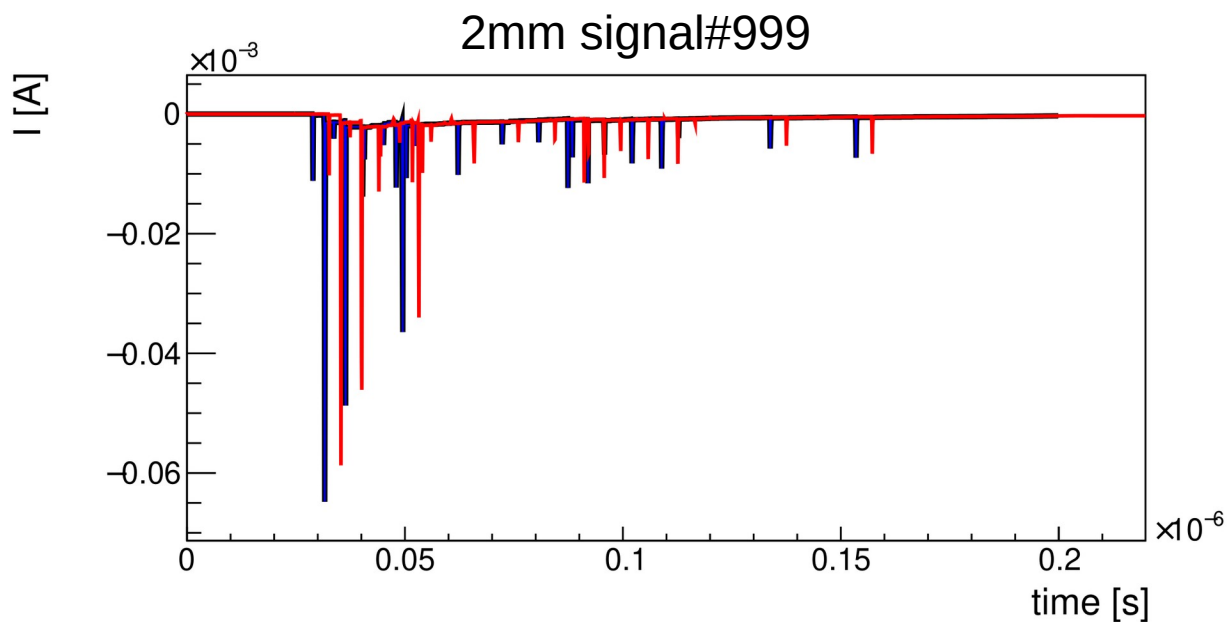


```
GasGain_Problem_3mm_RD51_theta.root  
GasGain_Problem_2mm_RD51_theta.root  
GasGain_Problem_1mm_RD51_theta.root  
GasGain_Problem_4mm_RD51_theta.root
```

Sonja (Garfield) and Sonja/Vitaly (IdealIN and RealisticIN):

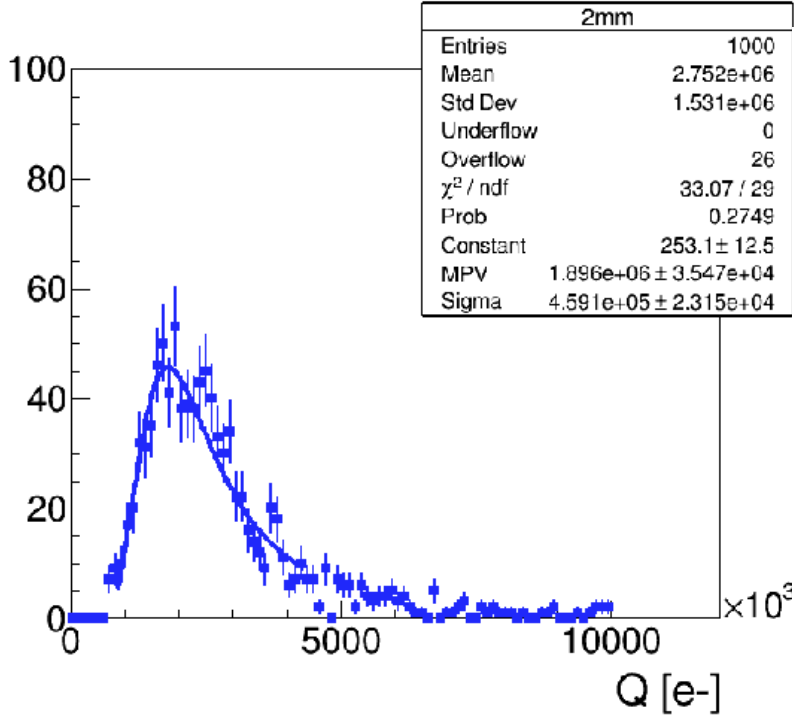
```
# ls signals
```

```
1mm_RD51_default 3mm_RD51_default GARFIELD.zip IdealStraw.zip RealStraw.zip
2mm_RD51_default 4mm_RD51_default IdealStraw RealStraw
```

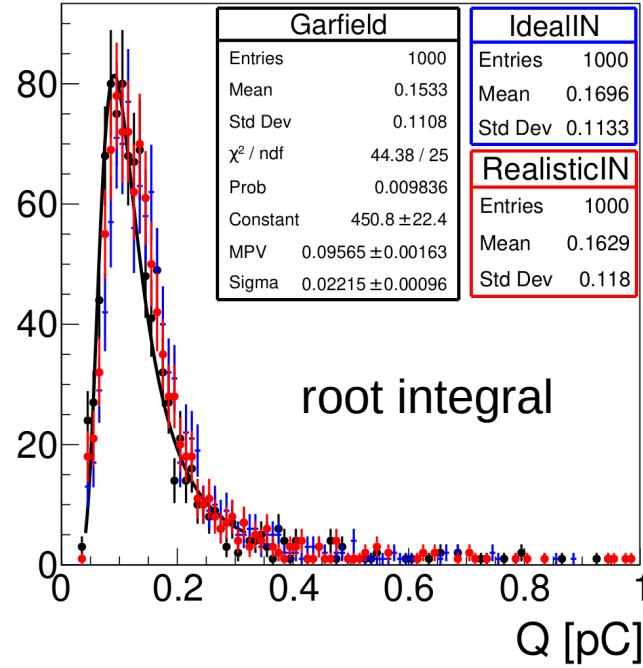


The problem:

Garfield++ total charge

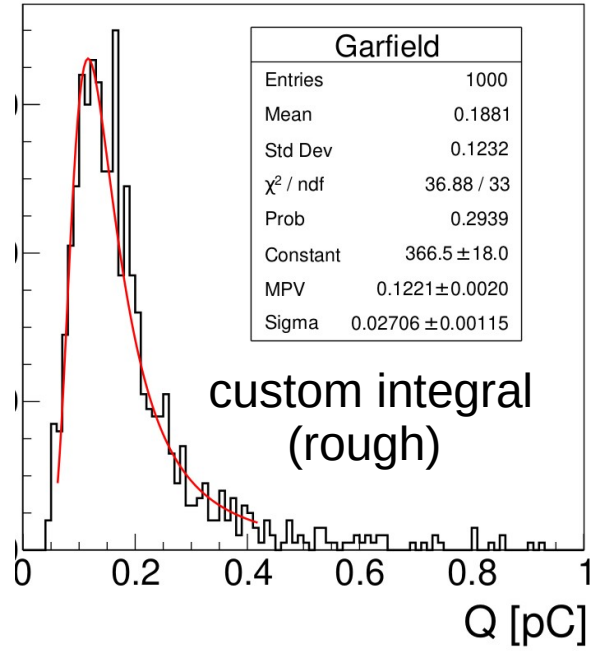


Garfield++ signal charge



root integral

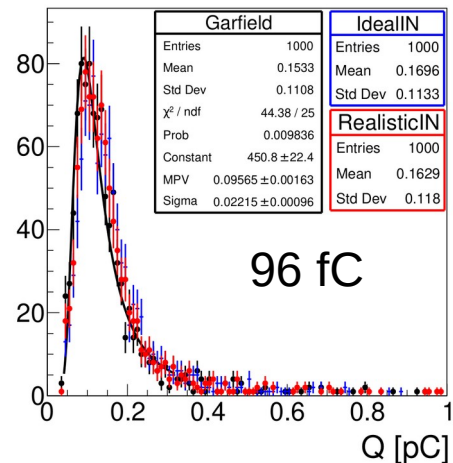
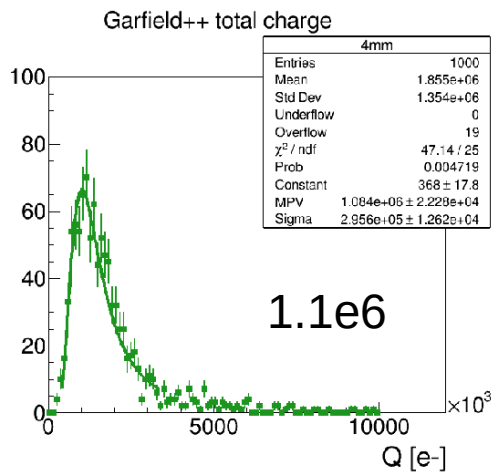
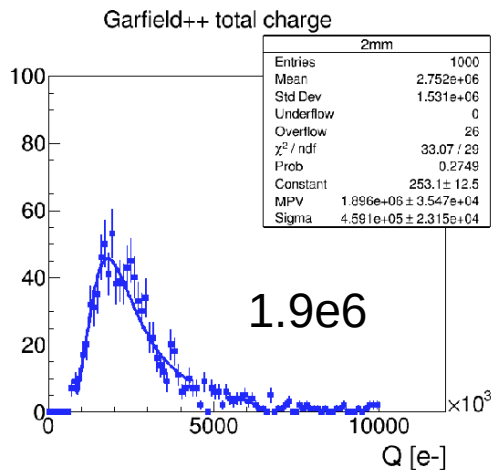
custom integral
(rough)



```
>>> 0.096e-12/1.6e-19
600000.0
```

**2e6 vs 6e5
=> factor 3...**

2 vs 4 mm



Ratio – ok
1.72 vs 1.71

