Status report #10

Contents

- status of beam time data analysis
- Hyper nuclear seminar

2020. 01. 09 (Thu)

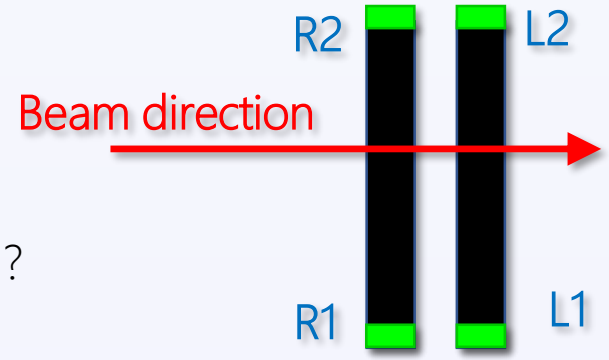
B4 T. Fujiwara

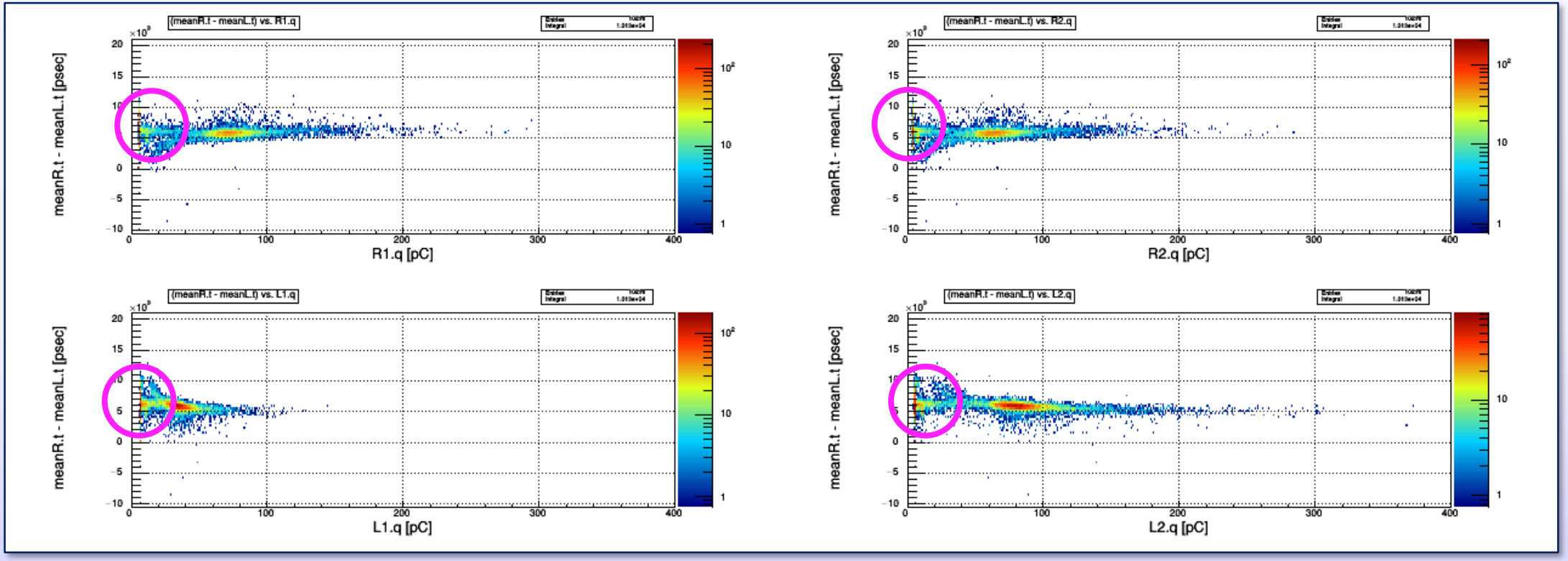
Happy new year!

Consideration for cutoff conditions -i-

✓ Case of run0123 data (V_b = 44.7V)

- What I want to do: remove QDC ~ 0 region
- Total entry: ~ 18000, these region ~ 4000-5000 ⇒ accidental ?

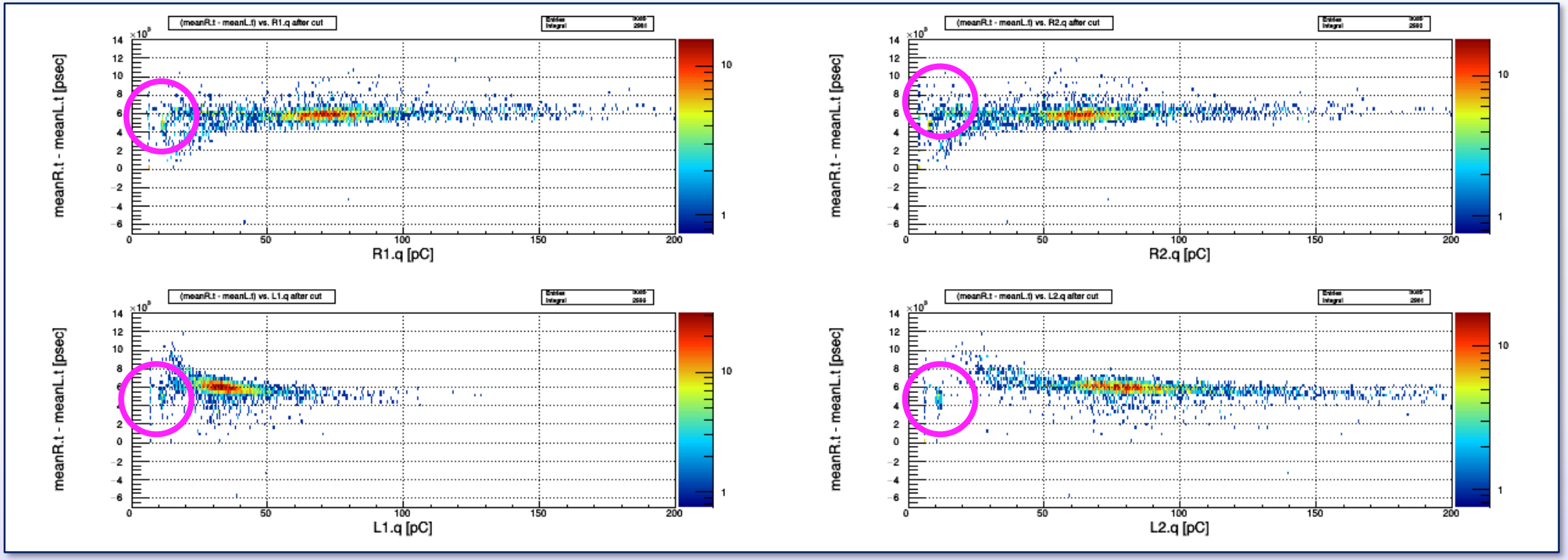




Consideration for cutoff conditions -ii-

- Apply ToF(BLT – T1) cut: (tdc of T1-1, 2, 3 & BLT1t, b > 0) ⊕ -23 [nsec]<(tdc mean of BLT1t, b – T1-1, 2, 3)<5[nsec]

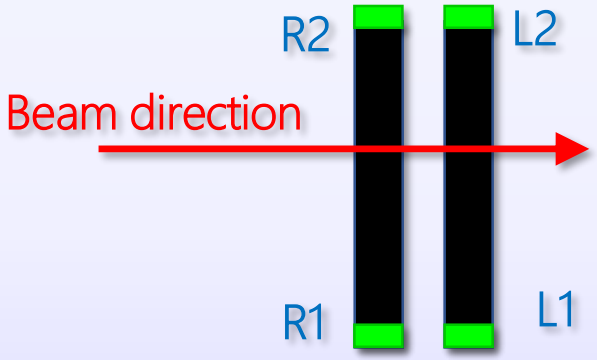
Still left…

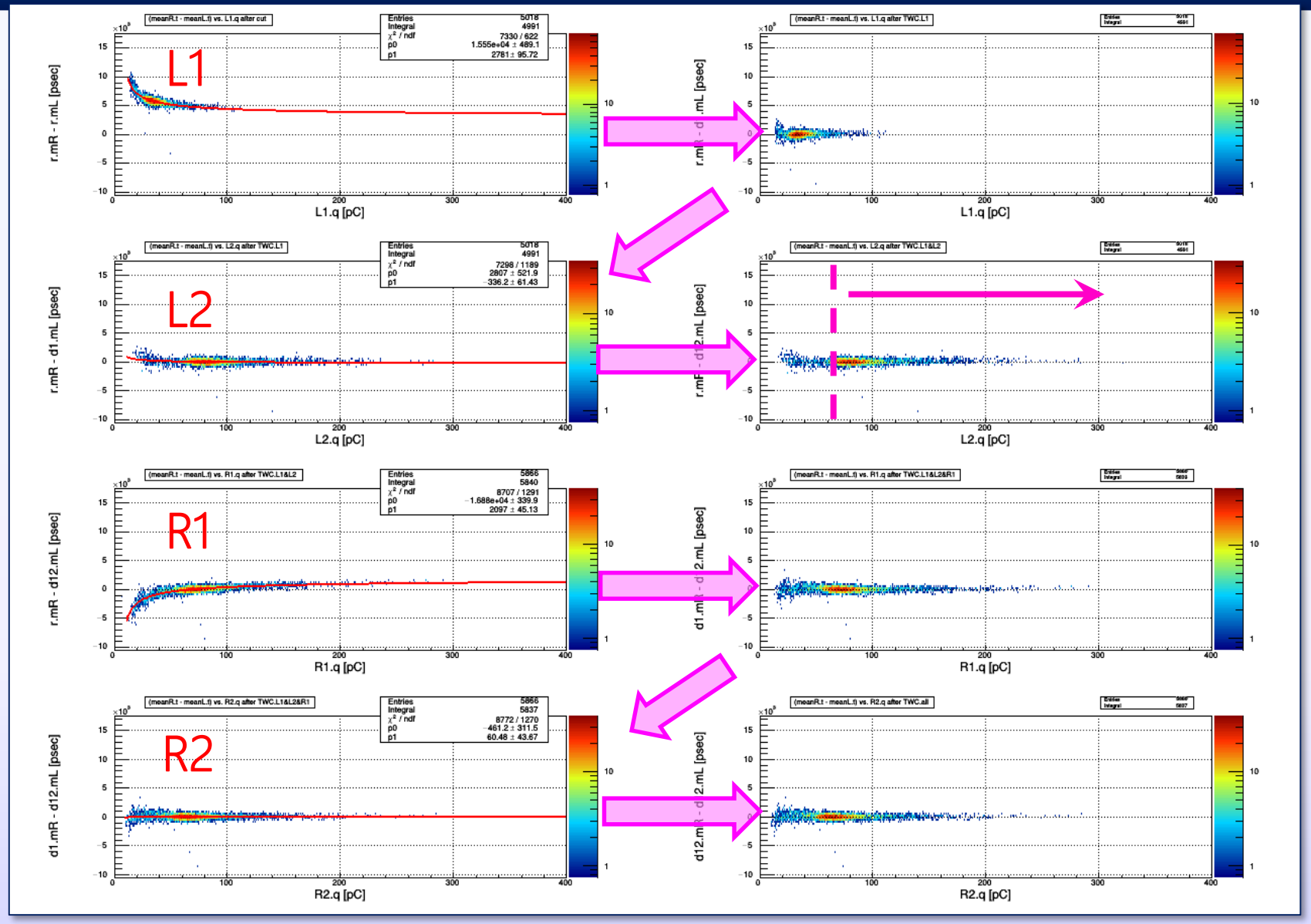


Time walk correction -i-

- For now, twc with R1.qdc:
  500[ch] < qdc2[10] (R1.qdc)< 1000

- From the result of correction for L2,
  690[ch] < qdc2[13] < 4095





Time walk correction -ii-

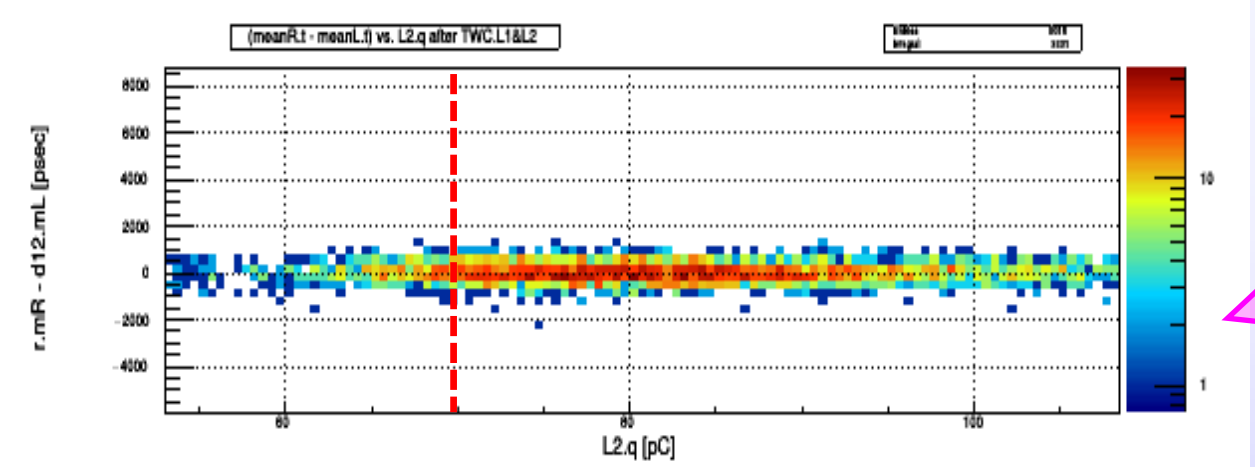
✓About decision of cutoff condition of L2.qdc

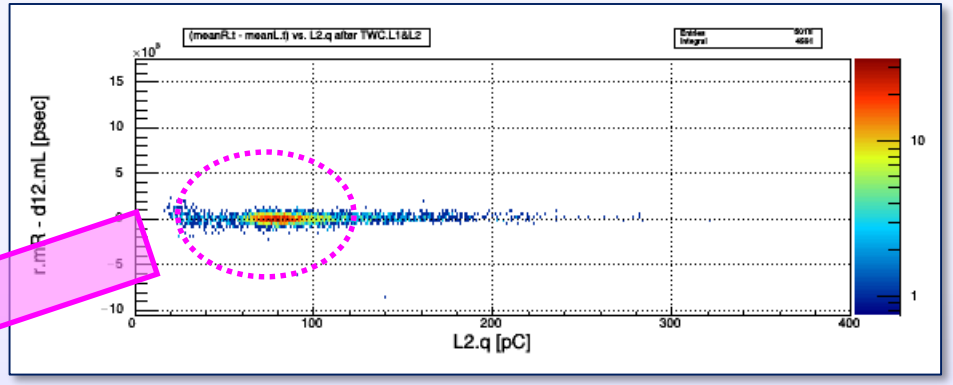
- What I wanted to do

→ get position (x, y) of bin with maximum entry

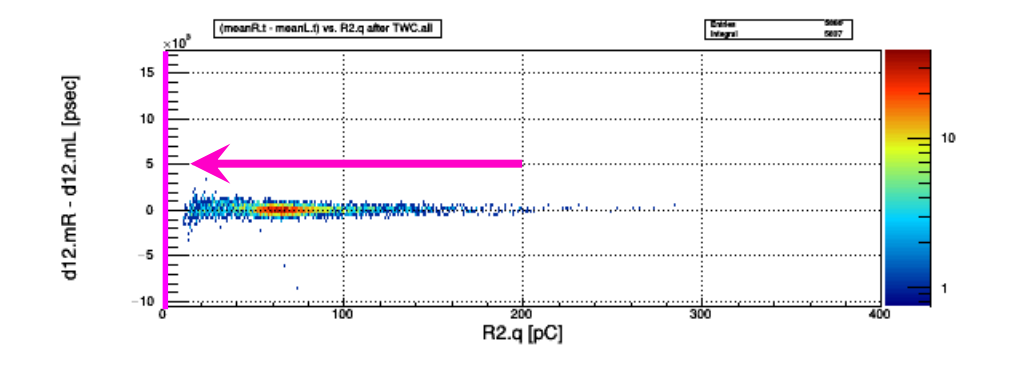
```
double max = h_twc[3] -> GetBinContent(h_twc[3] -> GetMaximumBin());
double M_X = h_twc[3] -> GetXaxis() -> FindFixBin(max);
```

→ return “69” but…



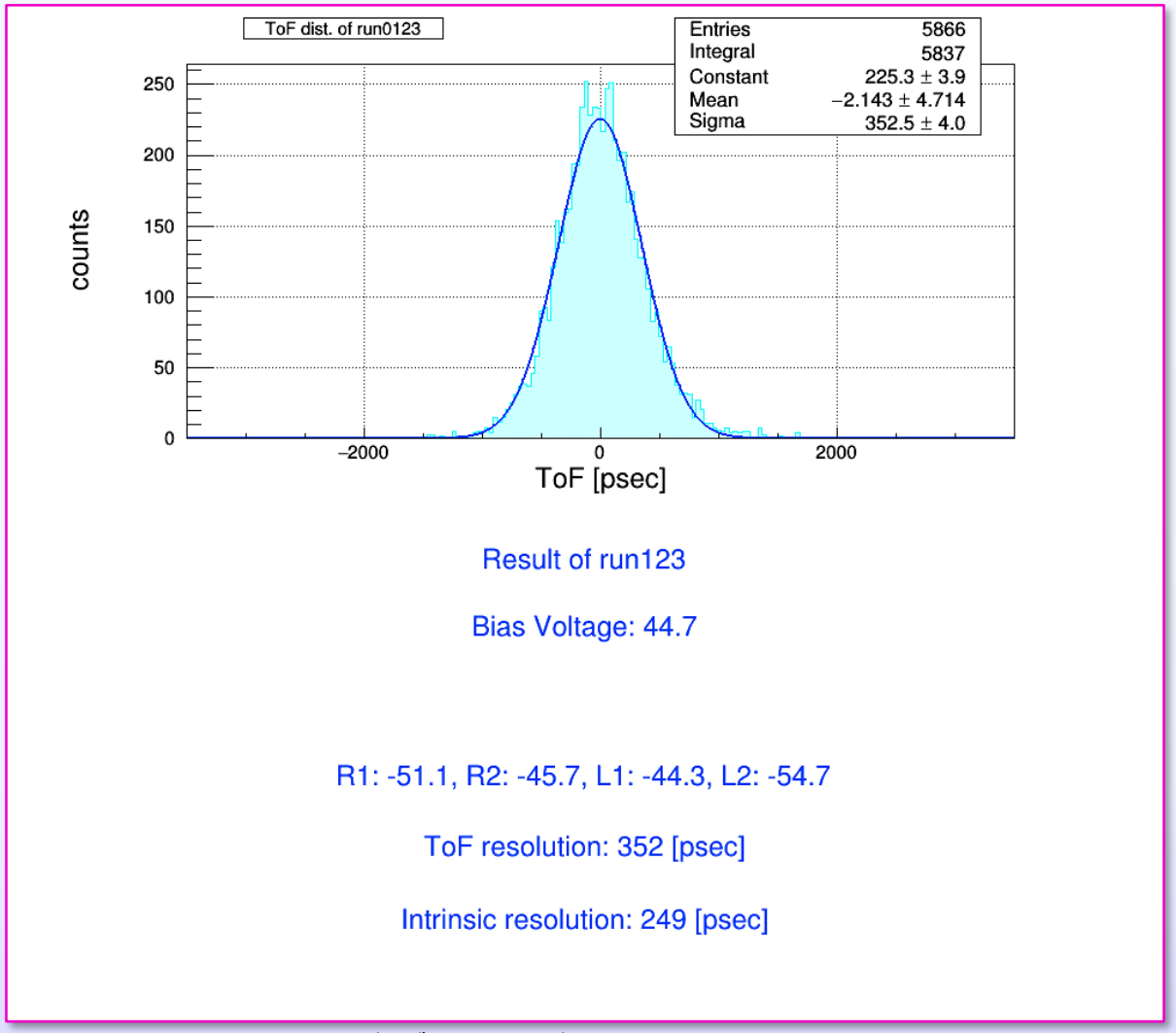


Time walk correction -iii-



*As a result, For 'run0123',

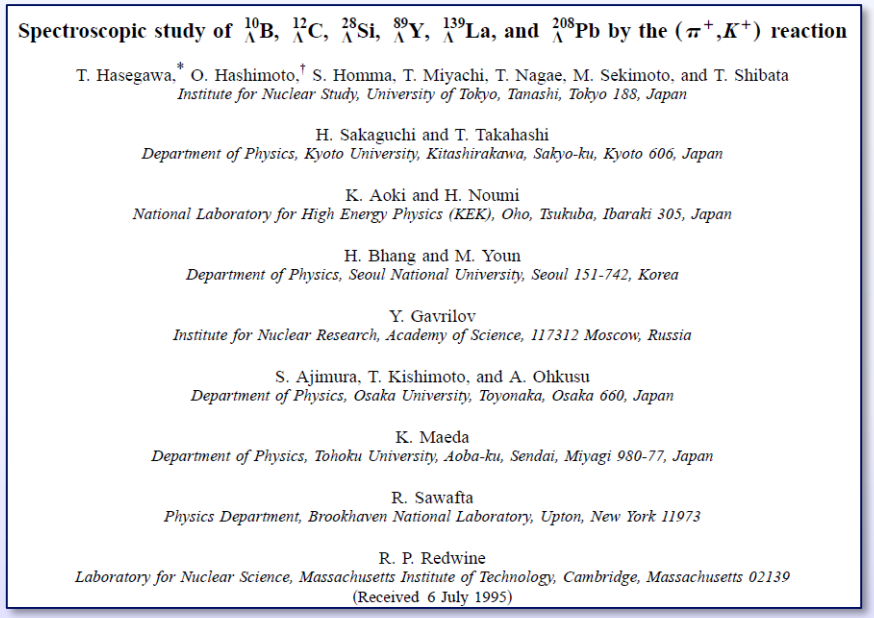
$\sigma_{\mathbf{Detector}} = 249\ [\mathbf{psec}]$



年末休み（とゼミの準備等）にかまけて解析に全然手を付けてませんでした...
申し訳ありません.
今日から頑張ります...

To do next

- To continue analysis: V_b, V_{th}T1 dependence
- "ToF counter" test at testbench using cosmic ray and β-ray source
- Hypernuclear physics seminar
- JPS abstract



Spectroscopic study of $^{10}_{\Lambda}$B, $^{12}_{\Lambda}$C, $^{28}_{\Lambda}$Si, $^{89}_{\Lambda}$Y, $^{139}_{\Lambda}$La, and $^{208}_{\Lambda}$Pb by the (π^+,K^+) reaction

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