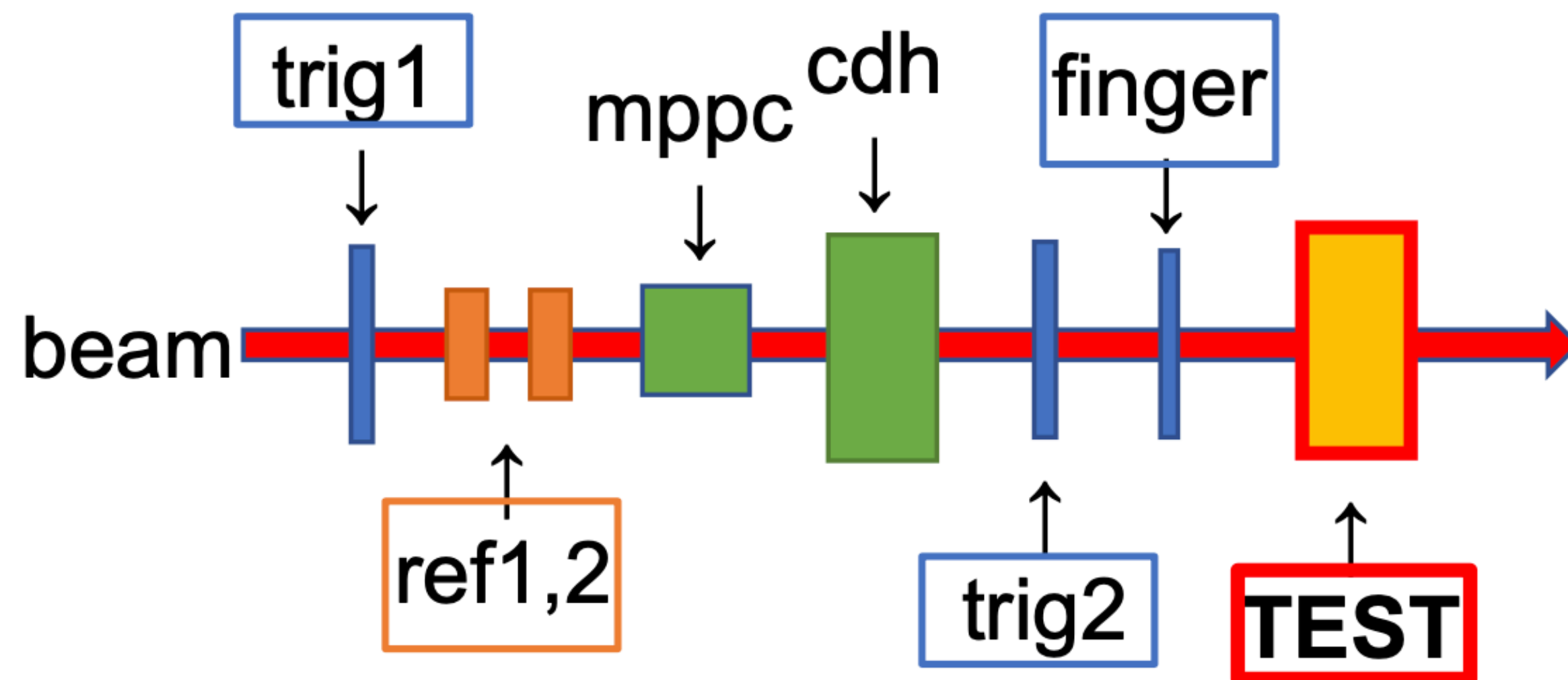


テスト実験セットアップ

配置した検出器



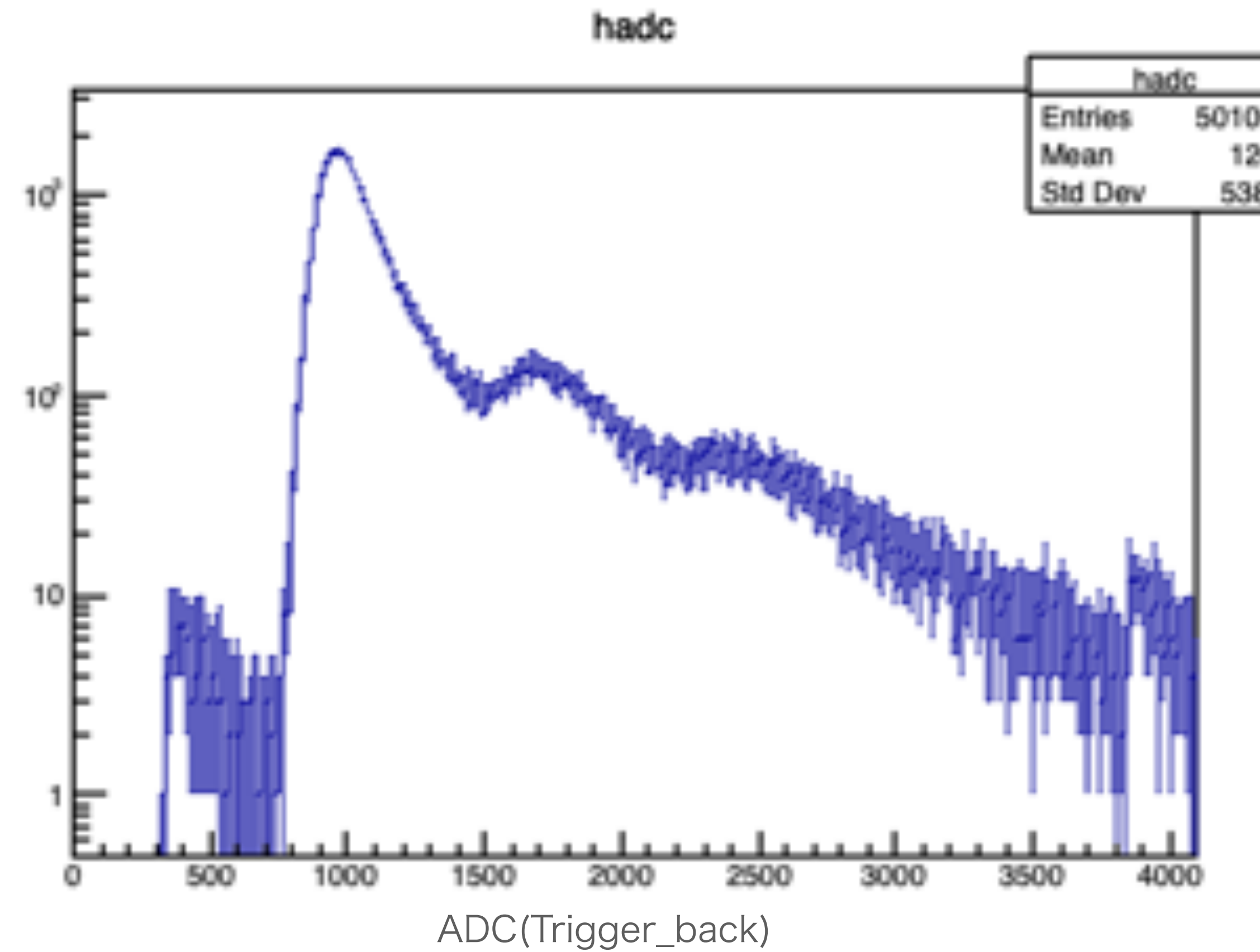
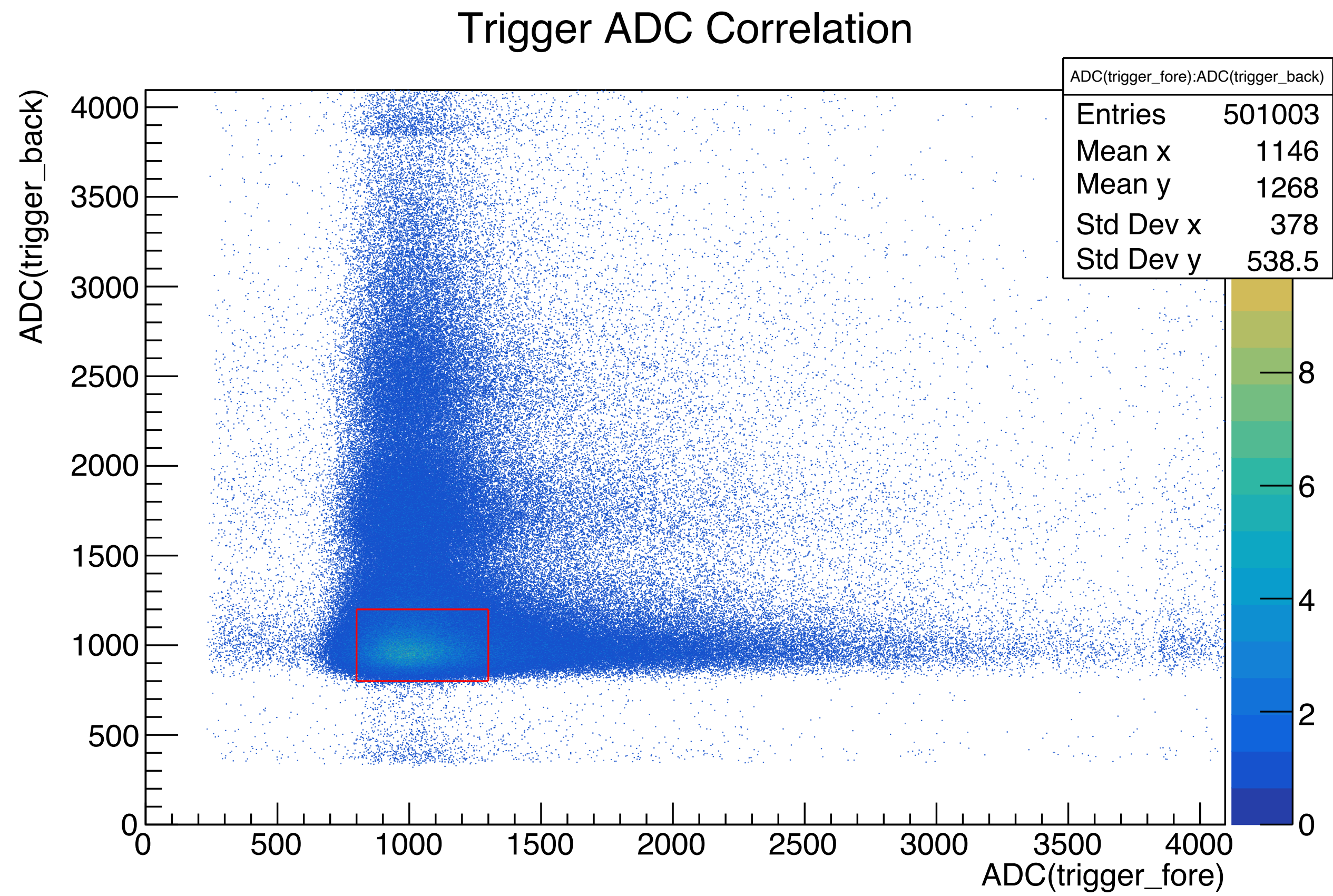
- ❑ DAQにはVMEを使用
QDC(v792),TDC(v775)
- ❑ beam momentum : 584MeV/c
- ❑ トリガーレート : ~1kHz
- ❑ トリガーの面の大きさ: 50*50(mm)



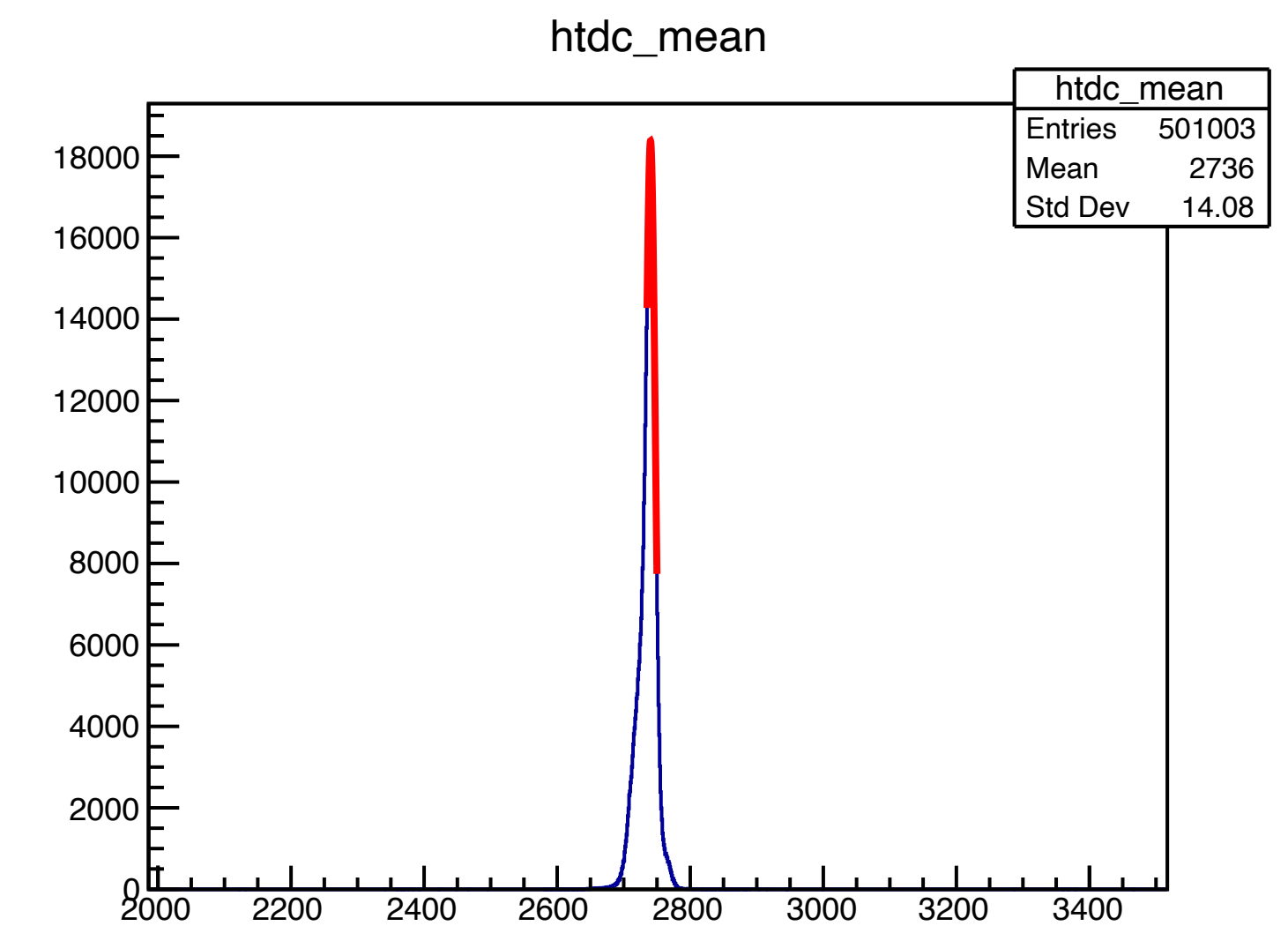
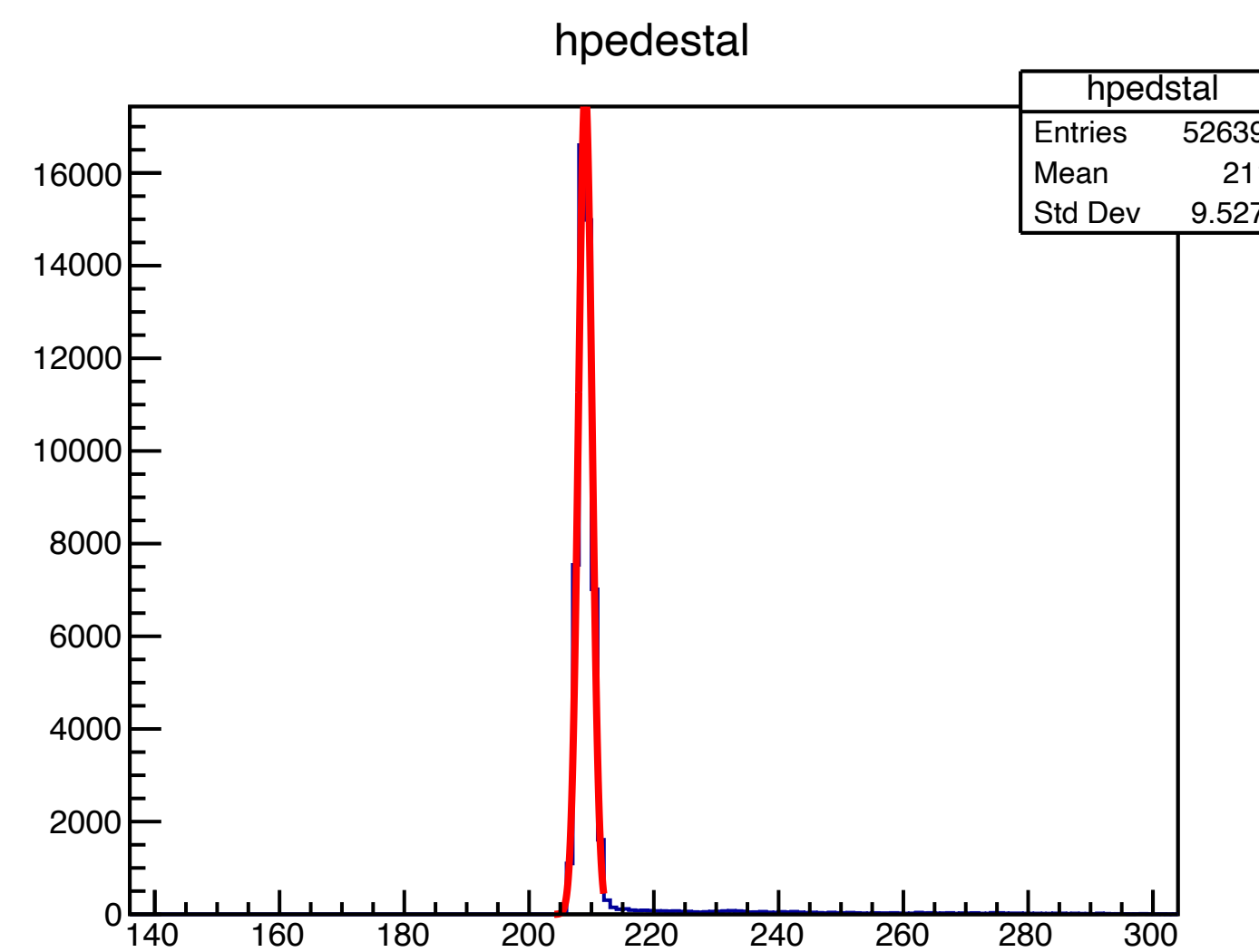
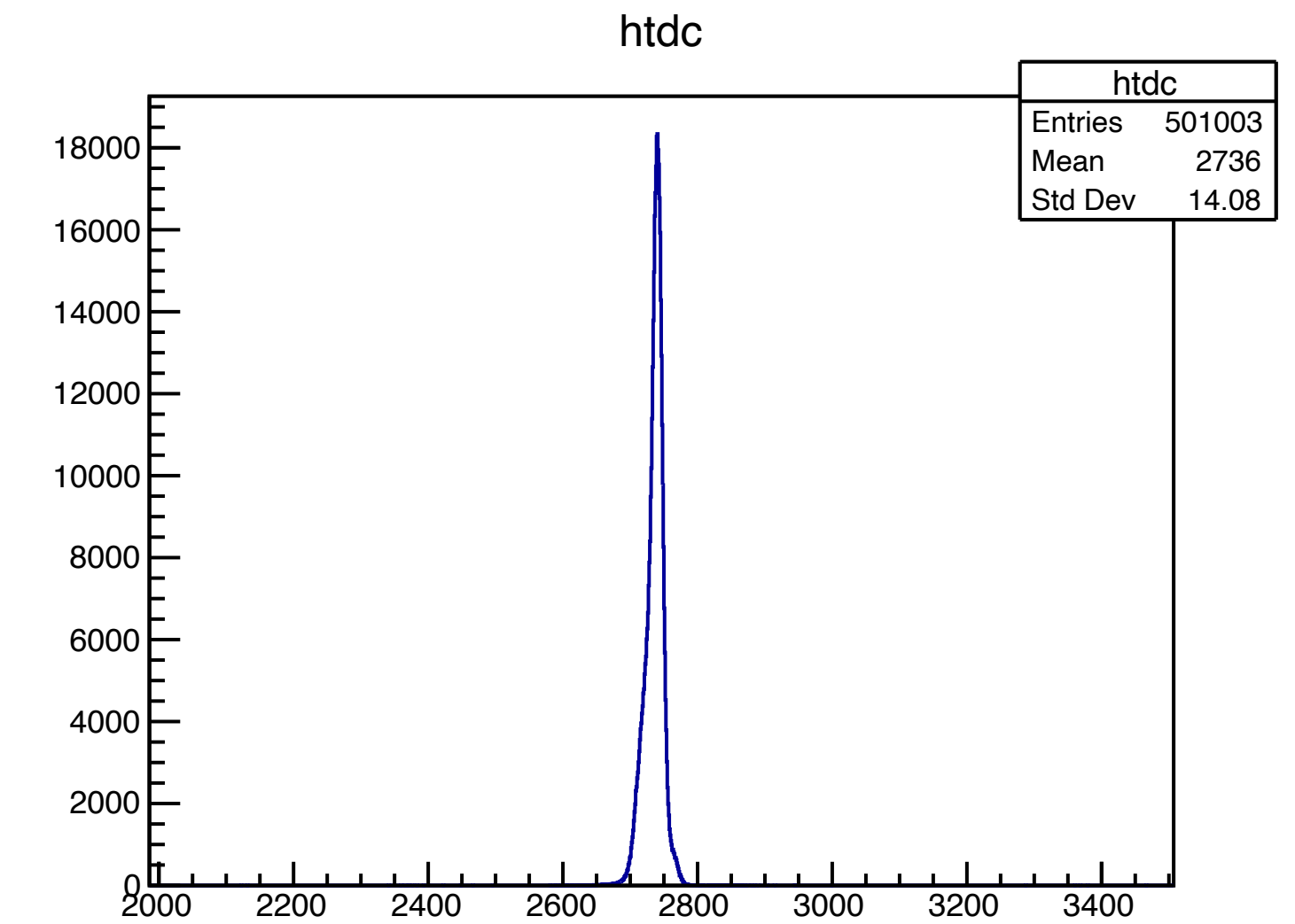
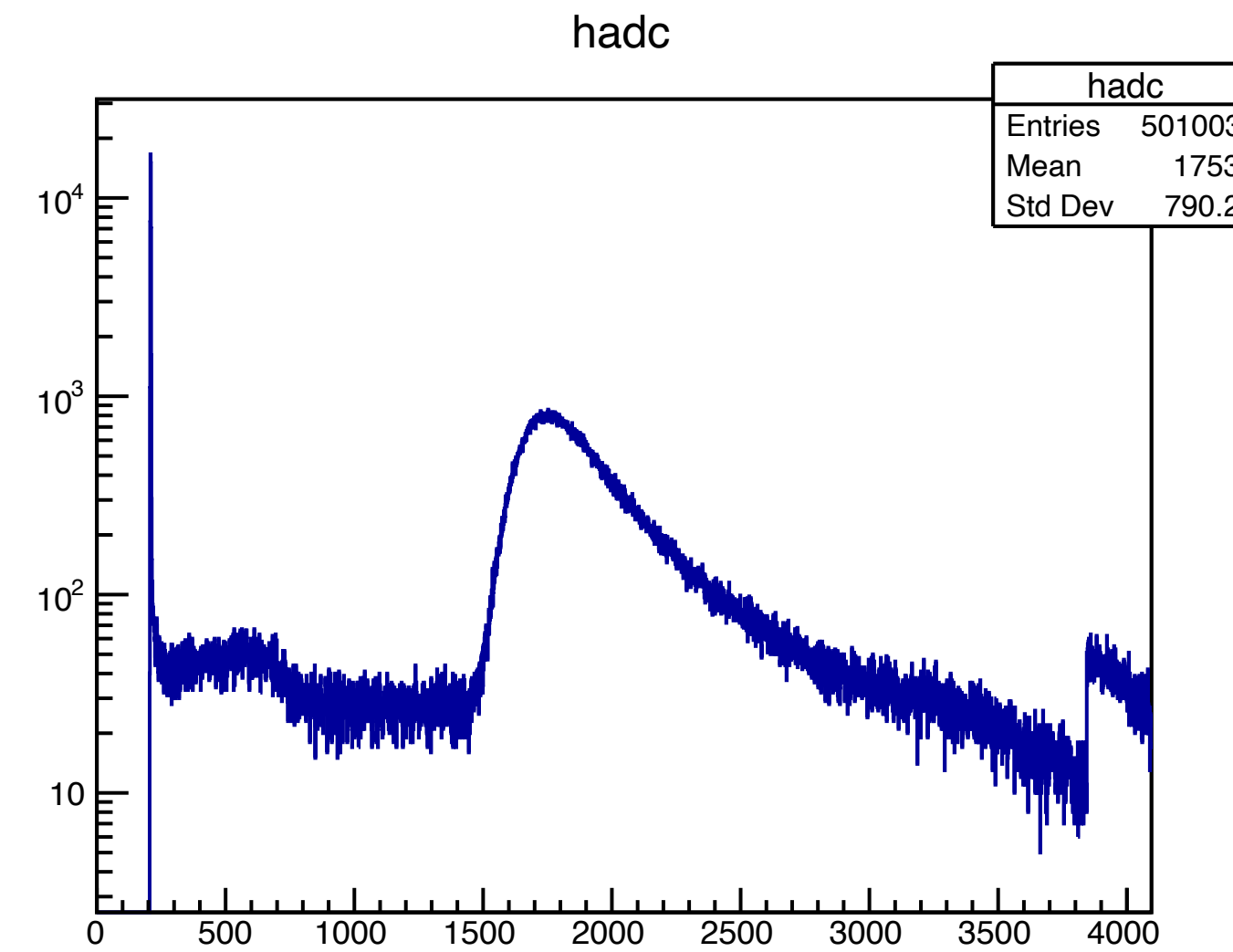
- **trig1,2**
 - トリガーとして使用
- **ref1,2**
 - reference timingの決定
 - $\sigma \sim 30\text{ps}$
- **finger**
 - 1cm角シンチ、位置の決定
- **TEST**
 - CNCまたはtest
- cdh, mppc
 - 別のテスト用検出器

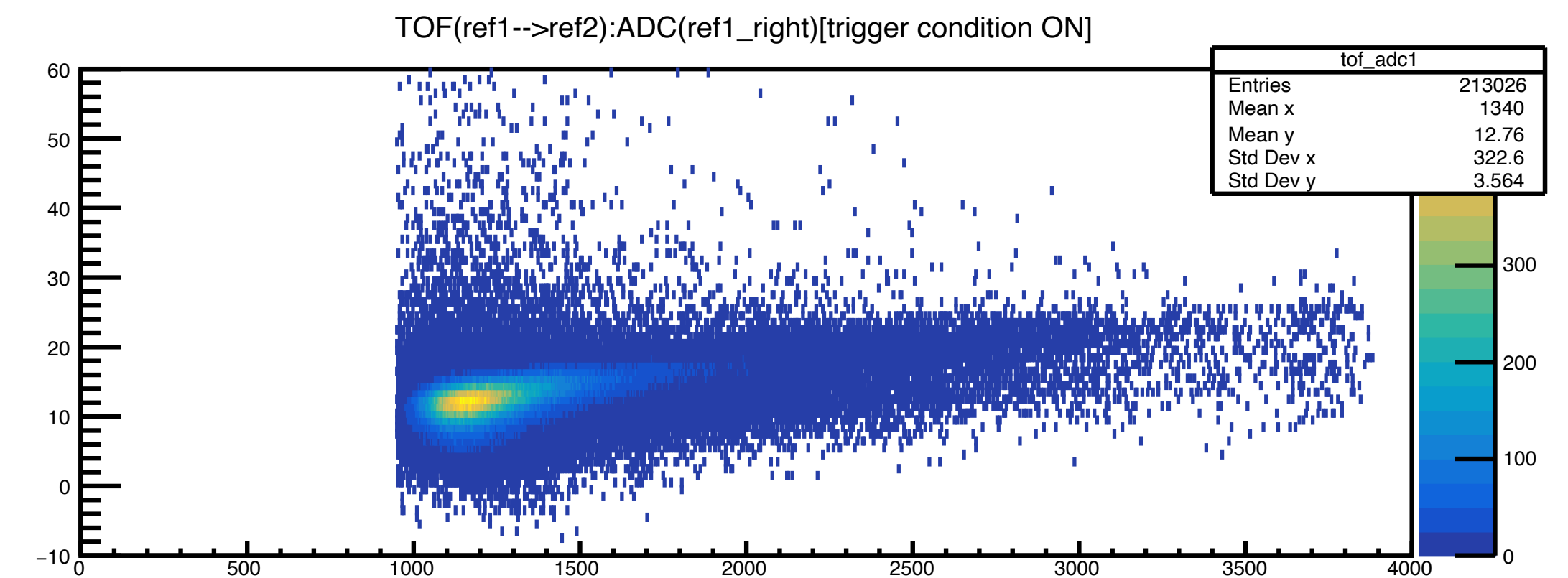
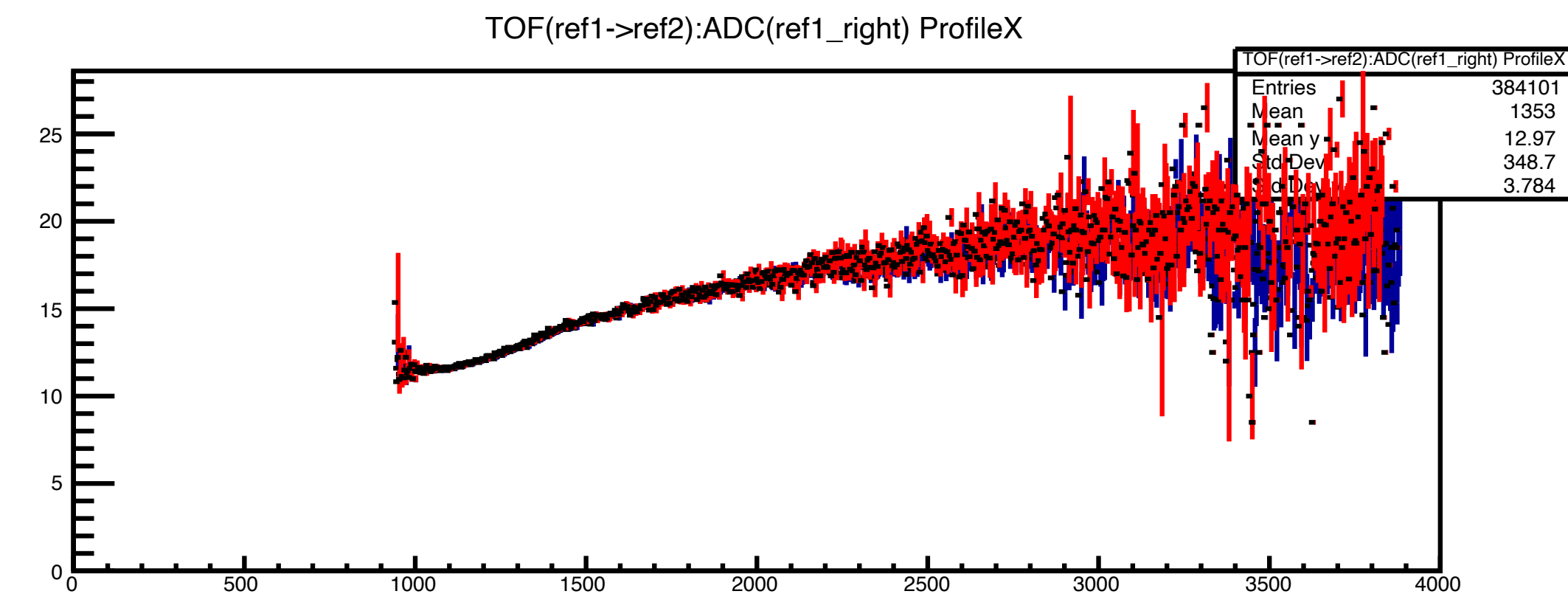
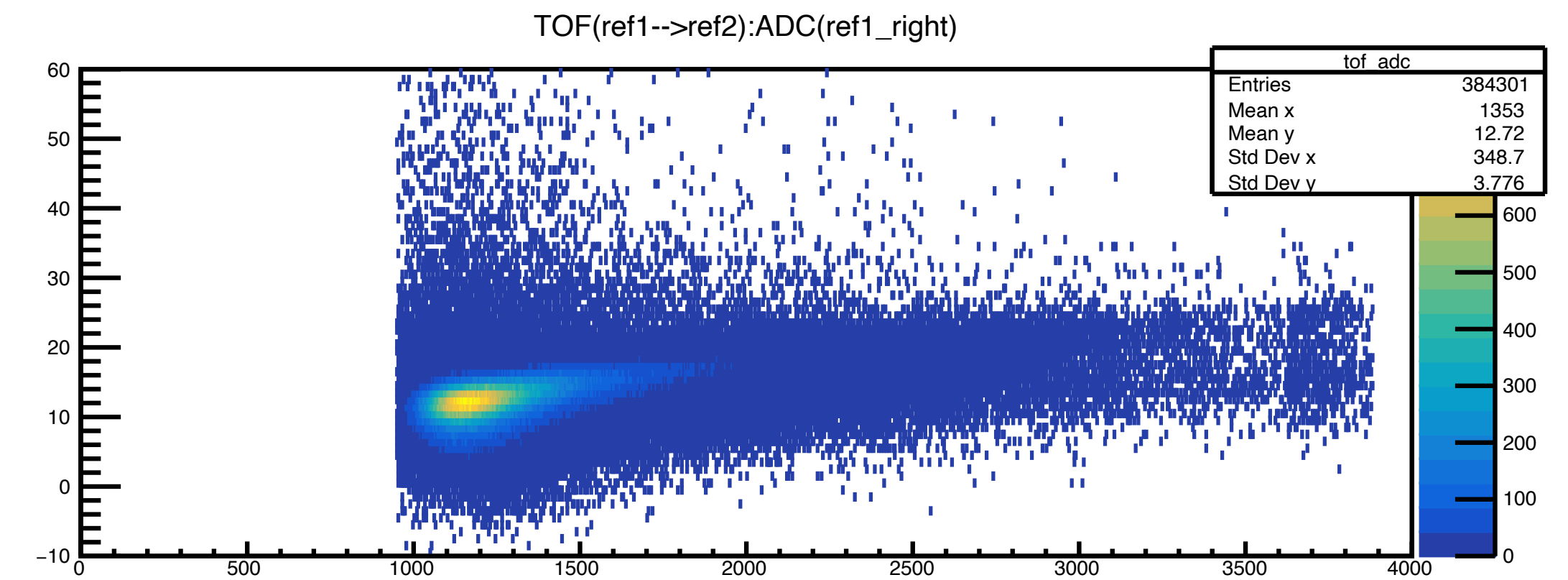
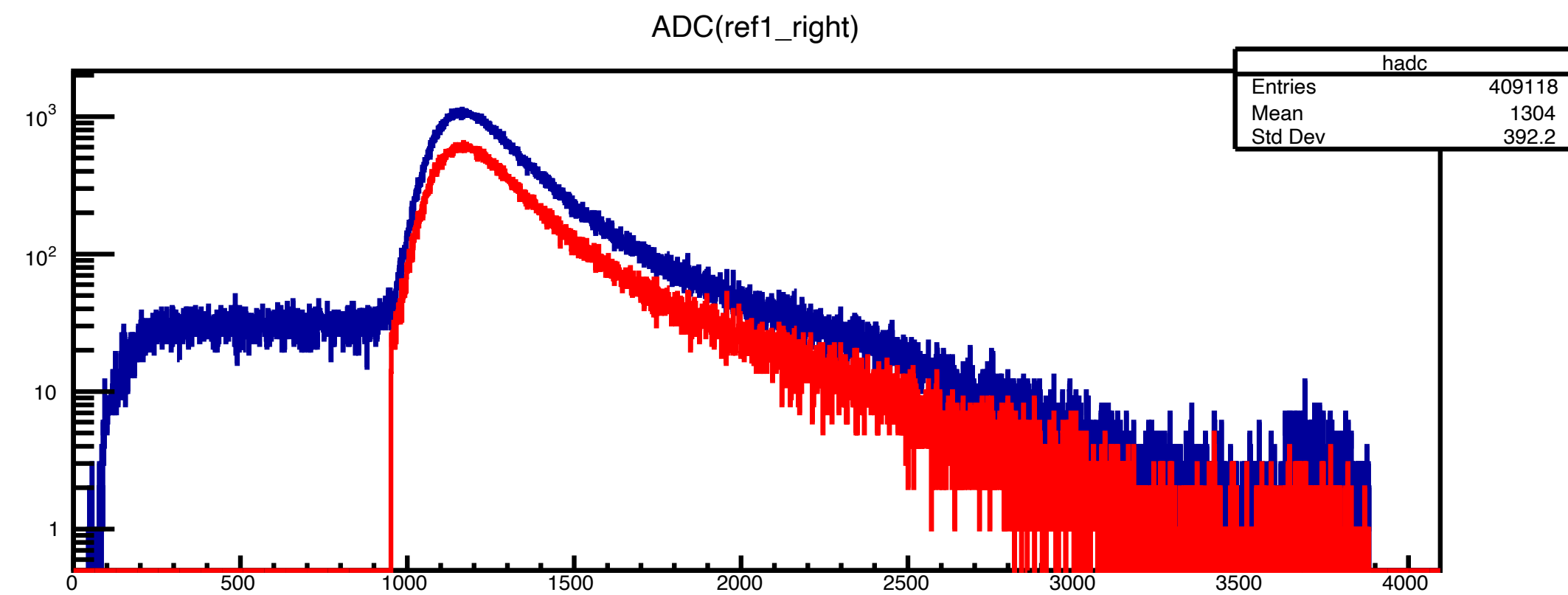
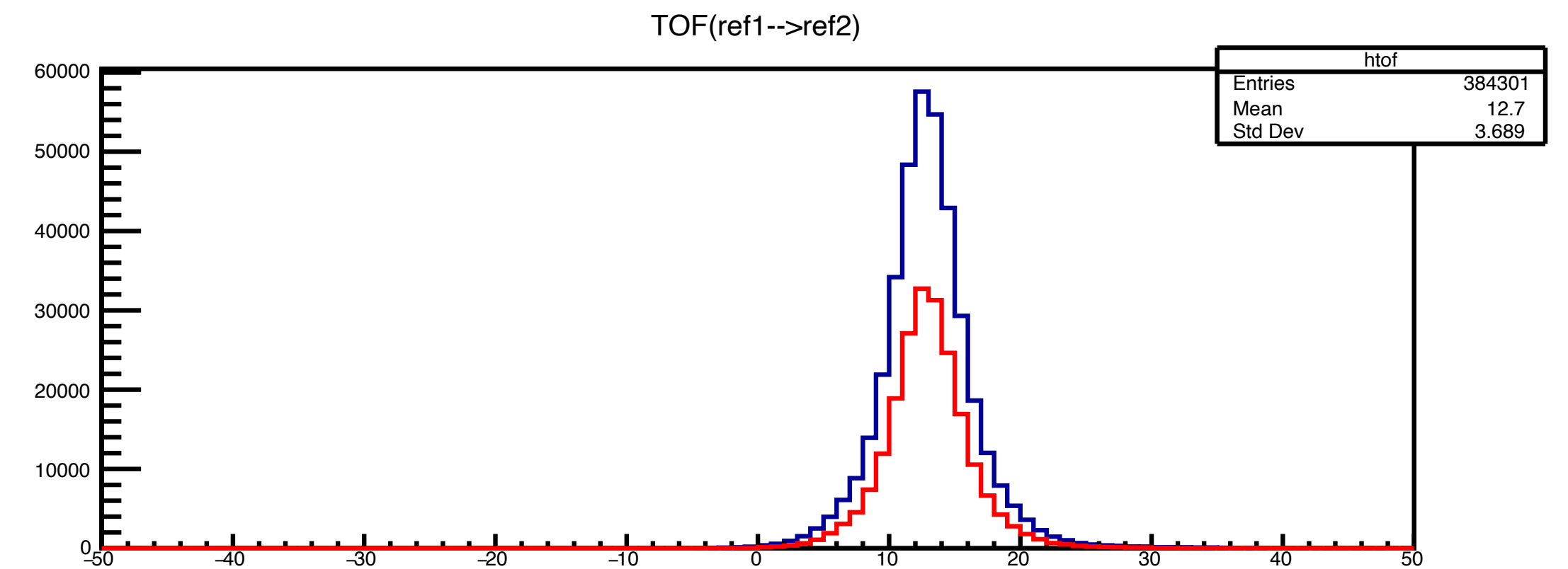
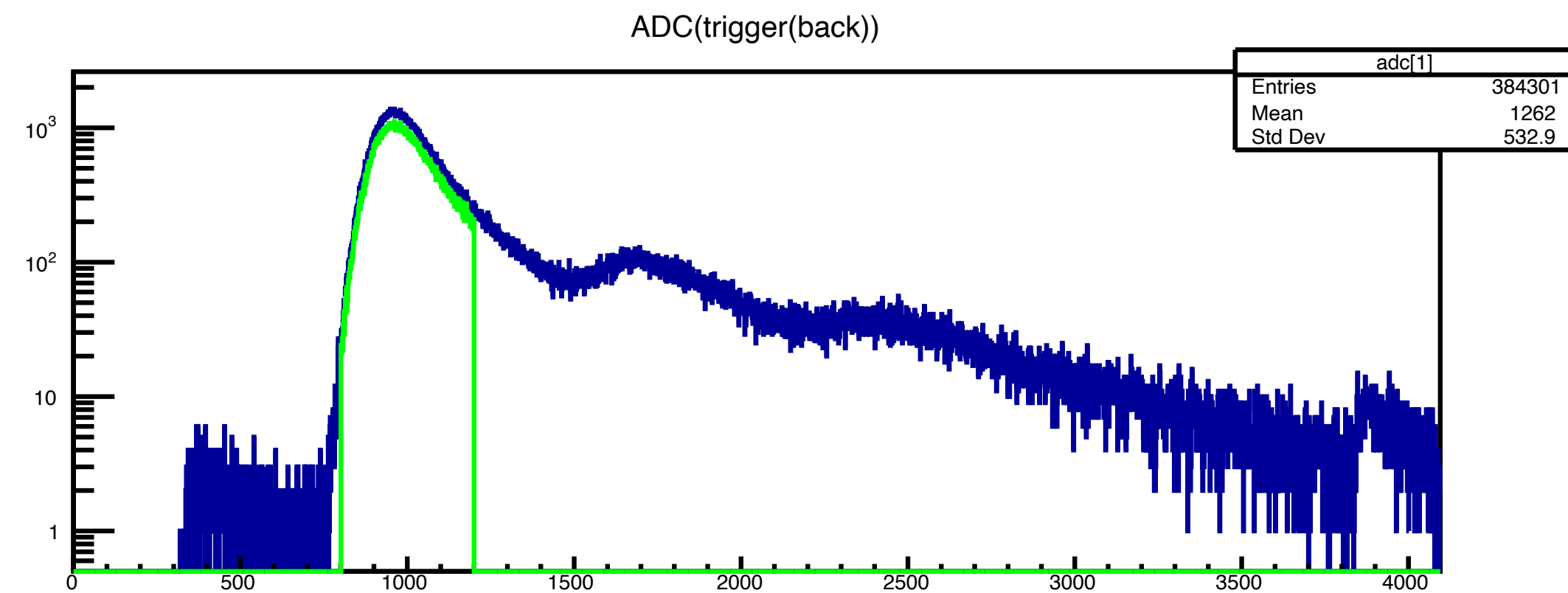
Ref1,2とmppcで解析の練習

- 後方のTriggerに2mip,3mip
- 赤枠内で以下の解析



- ADCのペDESTALをガウスでfit(TOF:ADC相関を見るため)
- ついでにTDCのピークもfit





• Trigger条件を課してもprofXは変化なし

• Fitting for slewing correction

エラーは1~10%(chi square等どこで見ると確認します)

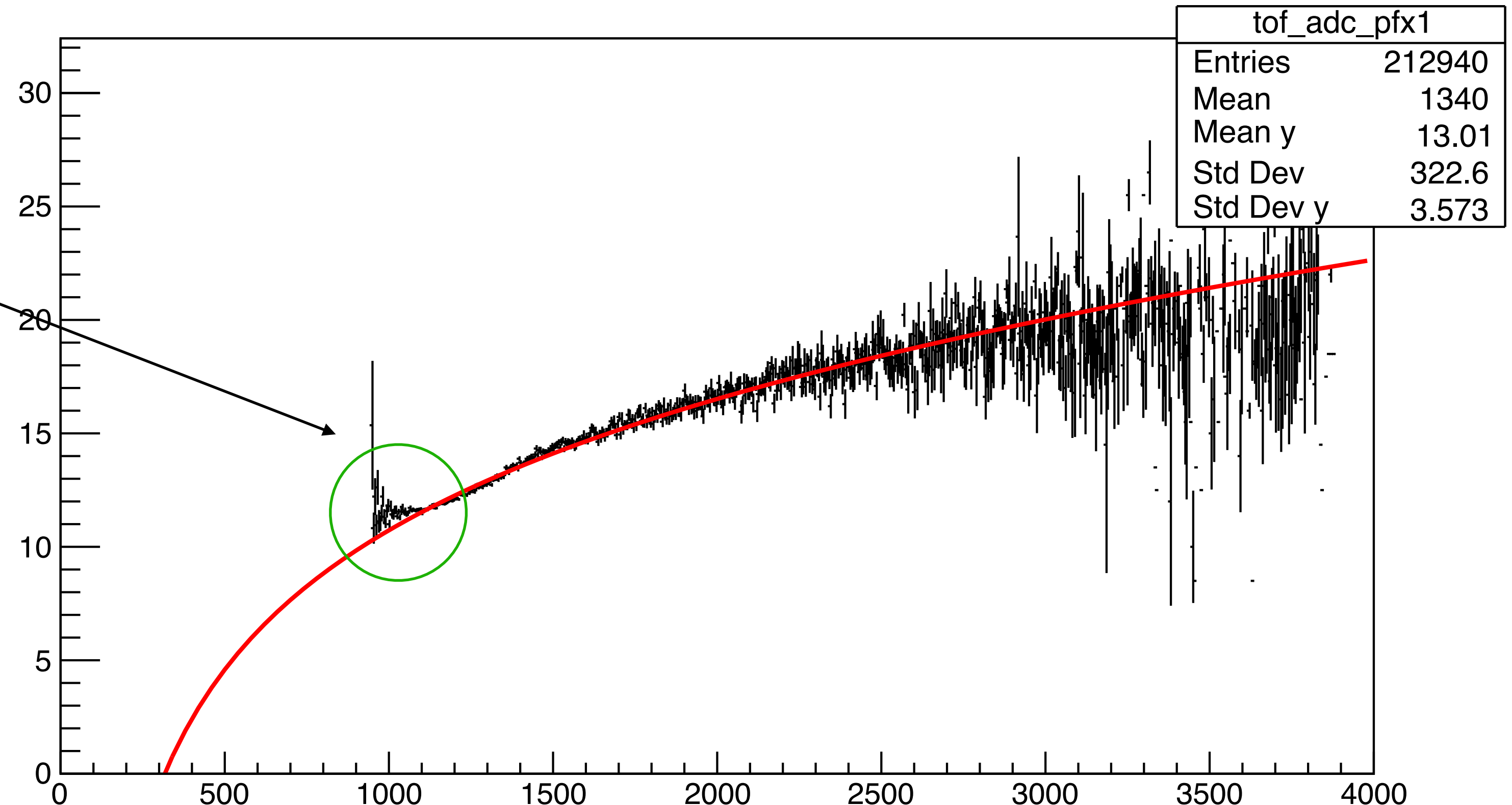
$$f(x) = a_0 + \frac{a_1}{\sqrt{x}} + a_2\sqrt{x}$$

NO.	NAME	VALUE	ERROR
1	p0	1.36222e+01	7.91687e-01
2	p1	-3.12483e+02	1.56156e+01
3	p2	2.20976e-01	9.92941e-03

TOF(ref1-->ref2):ADC(ref1_right)[trigger condition ON]

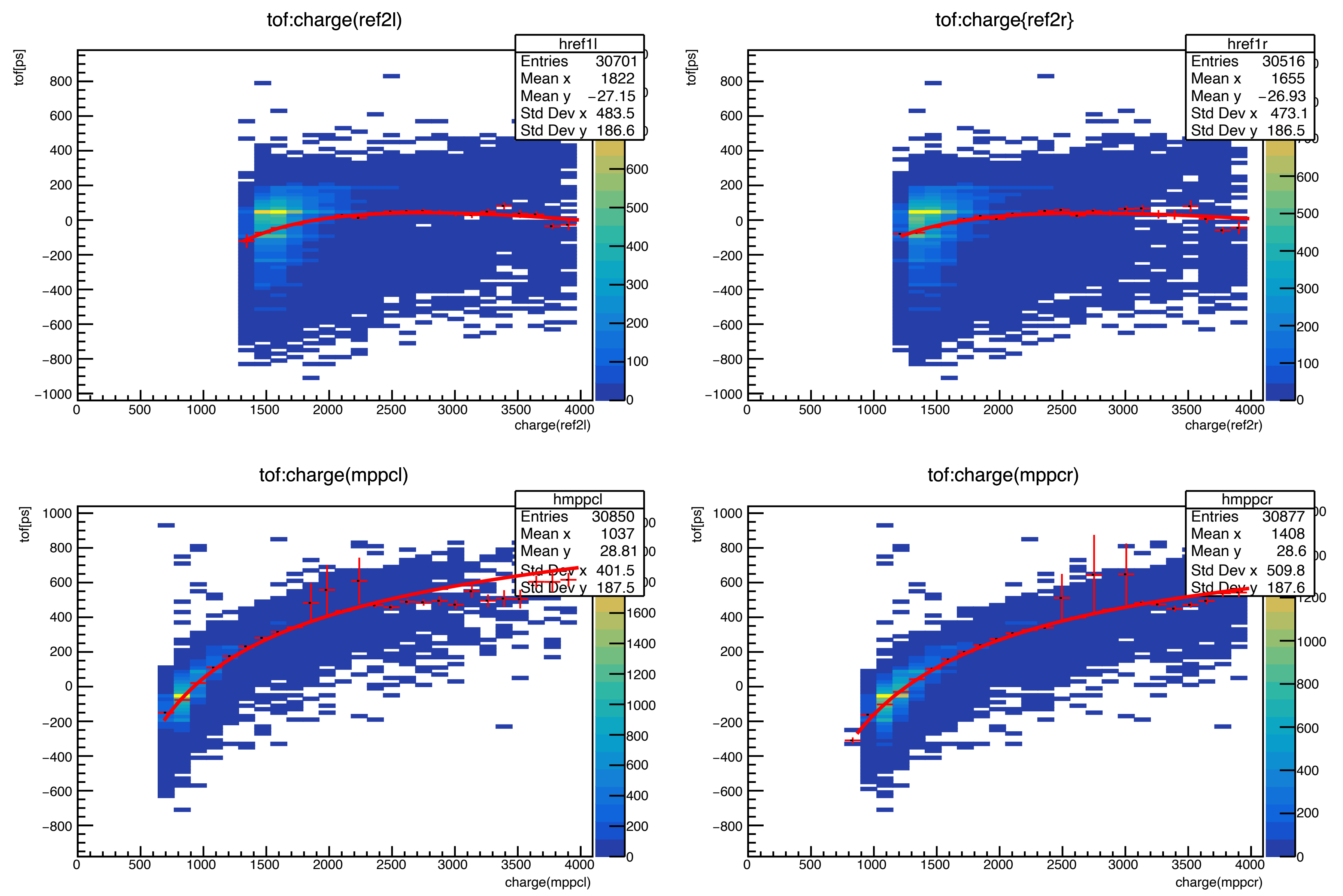
この部分が上手くない

- なぜこの関数形でfitするのかわからない。
—>なんとかして理解します

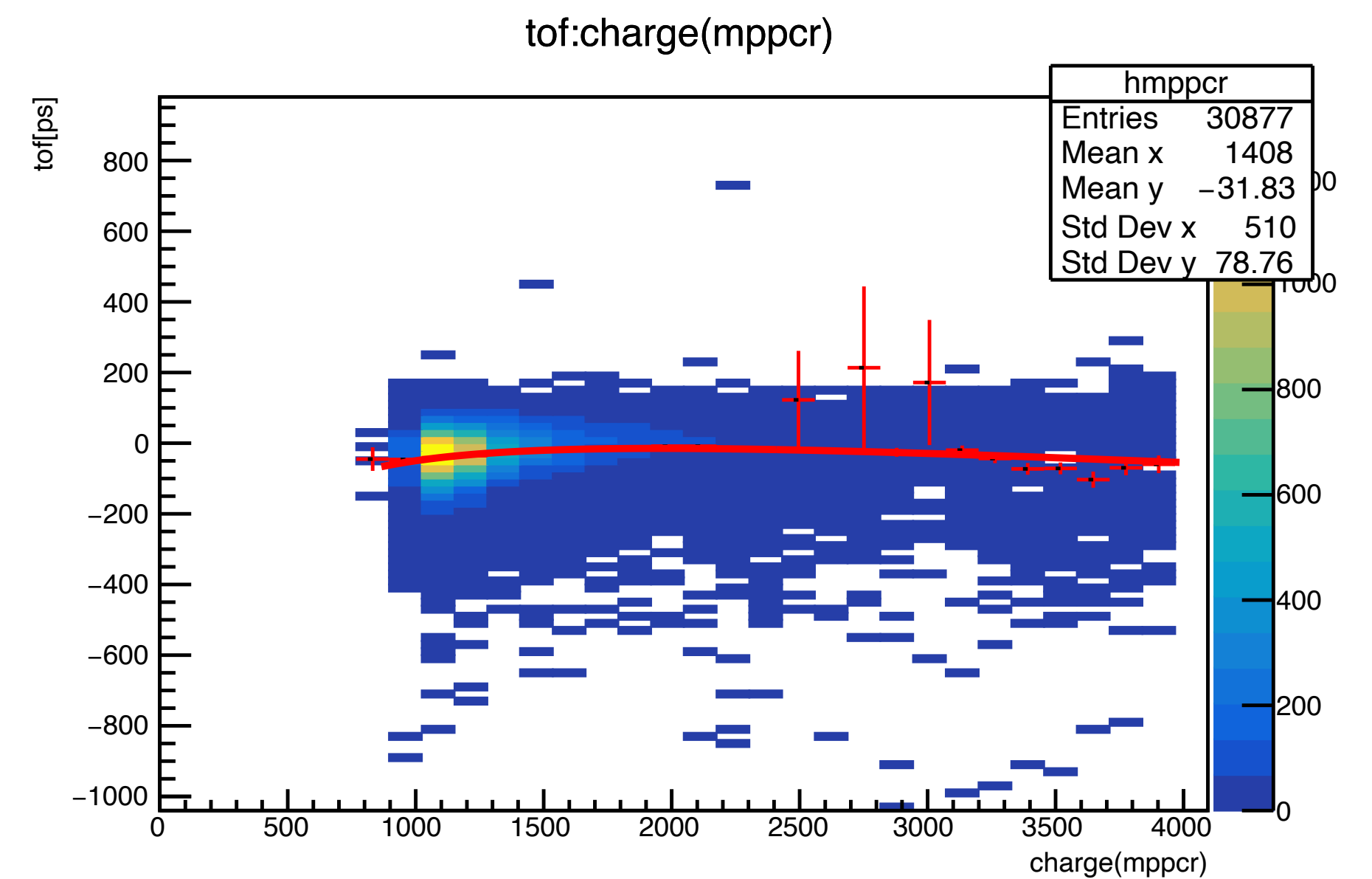
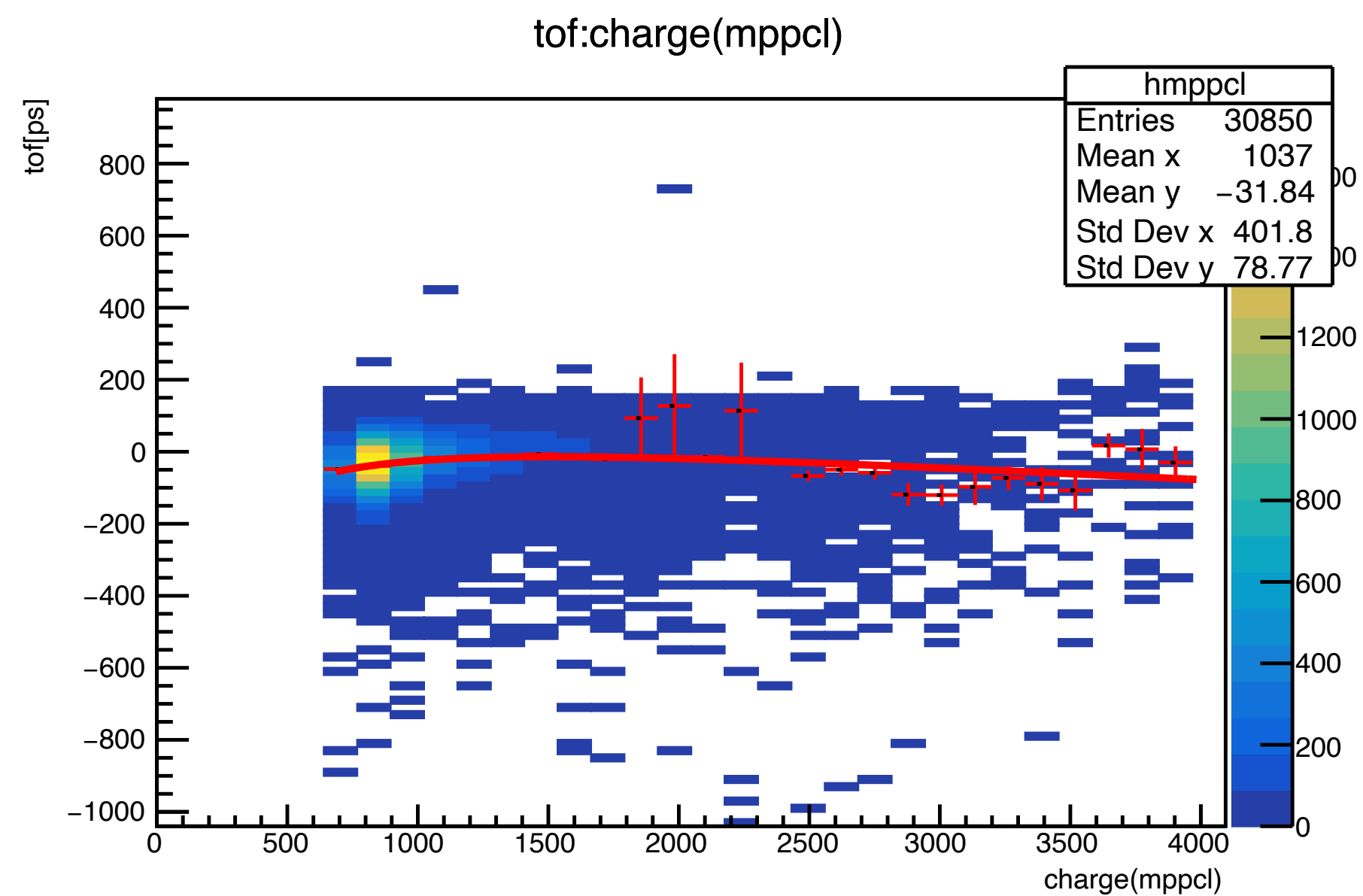
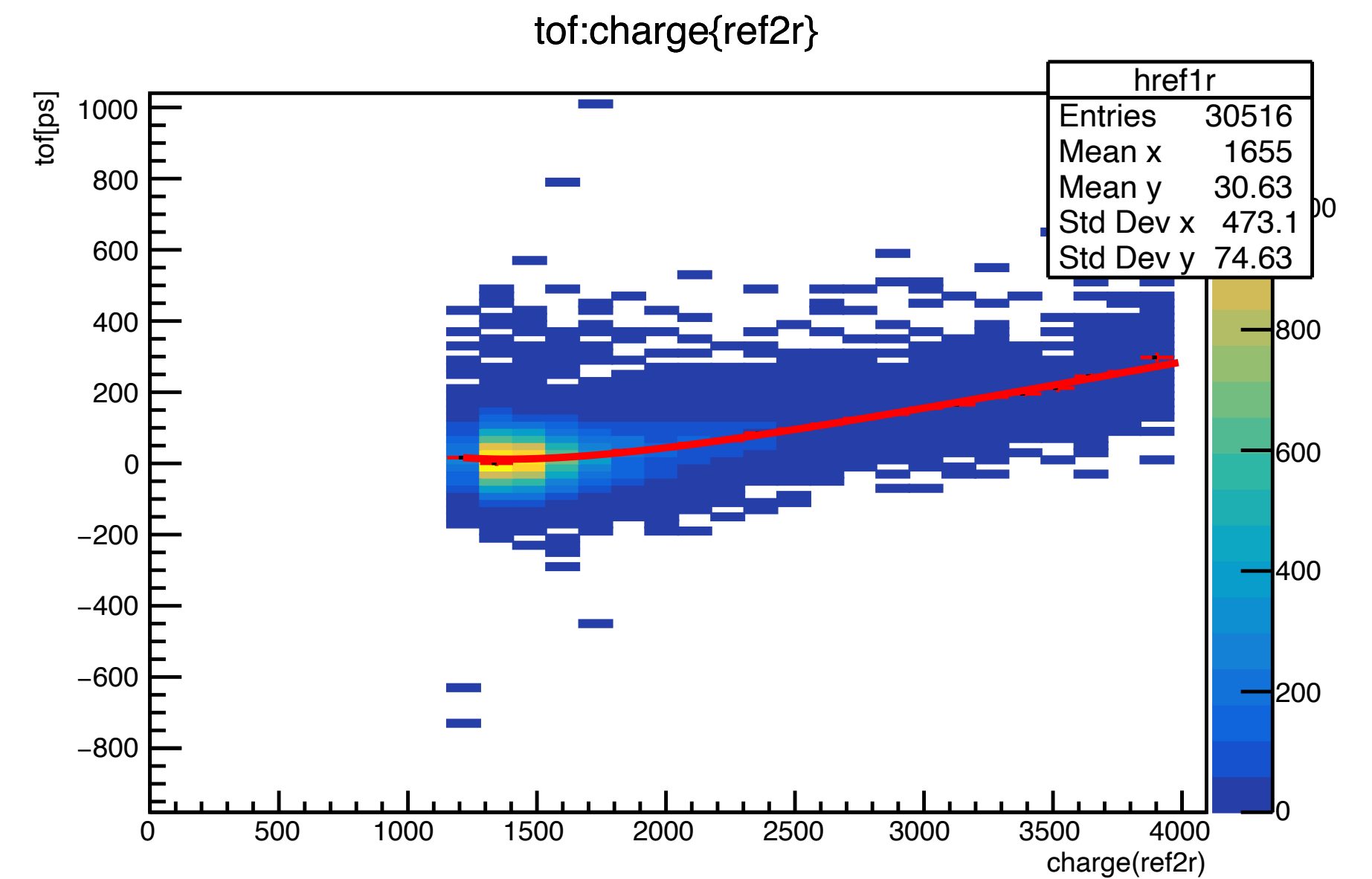
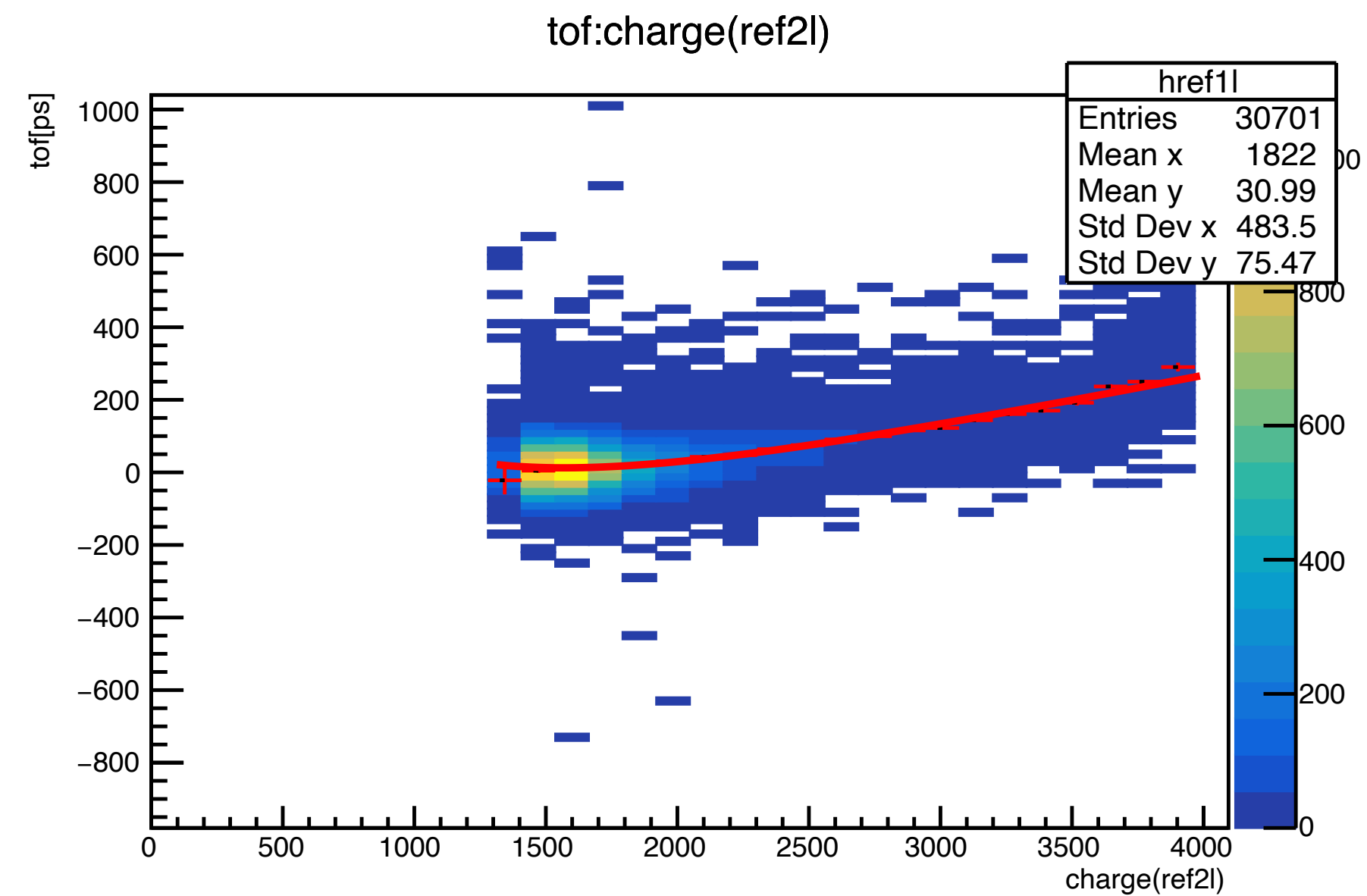


- Slewing 0回目

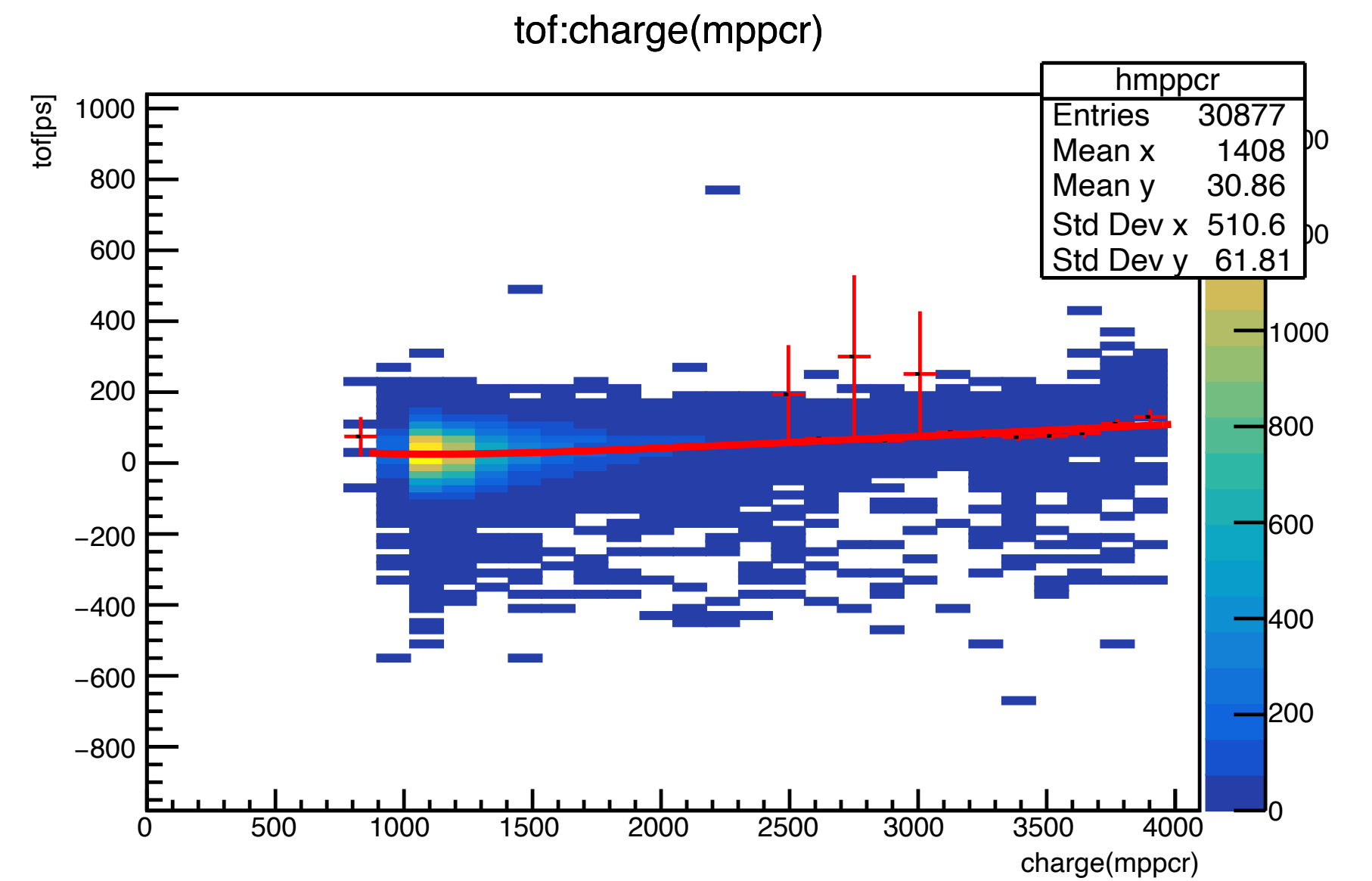
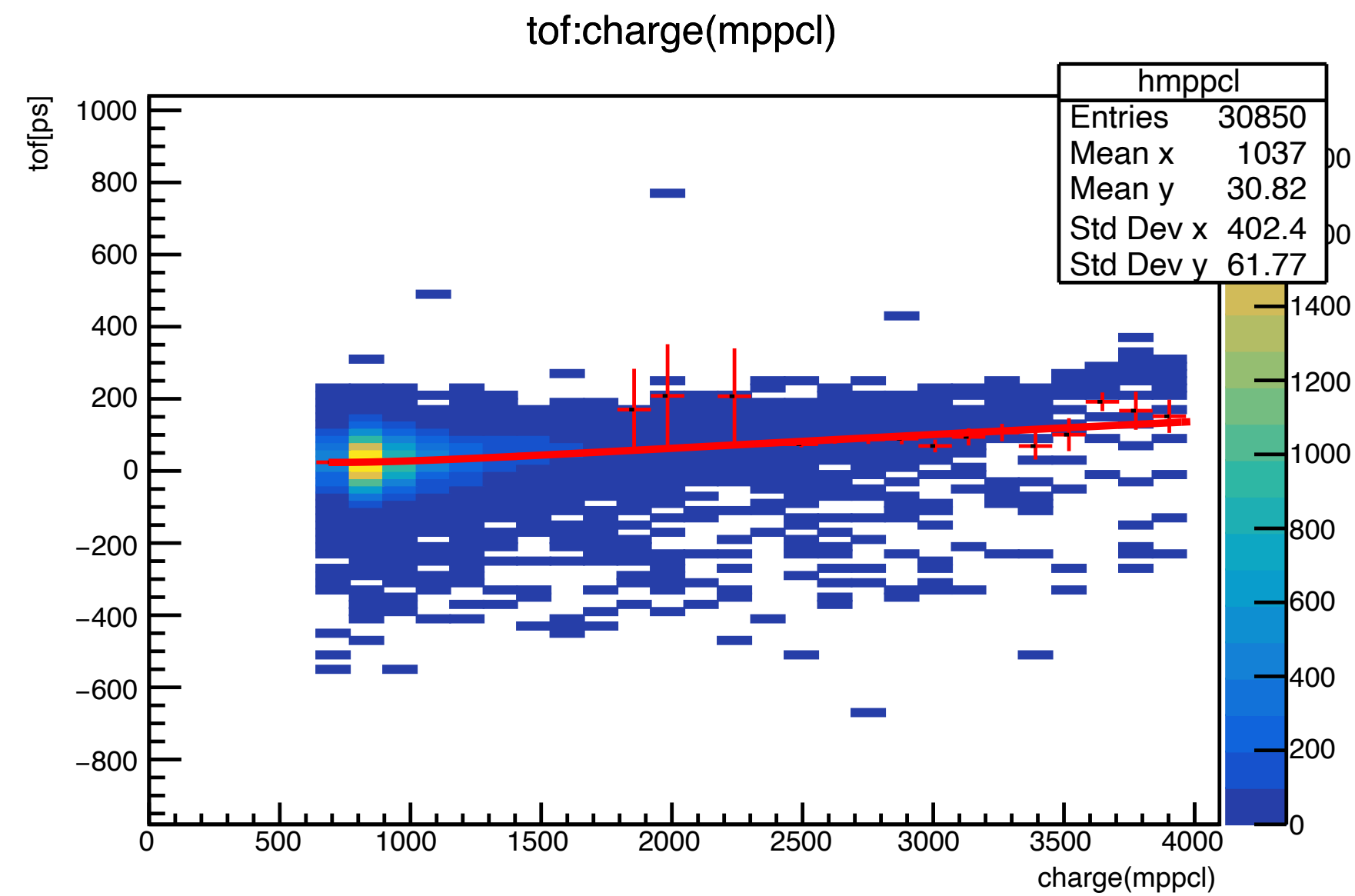
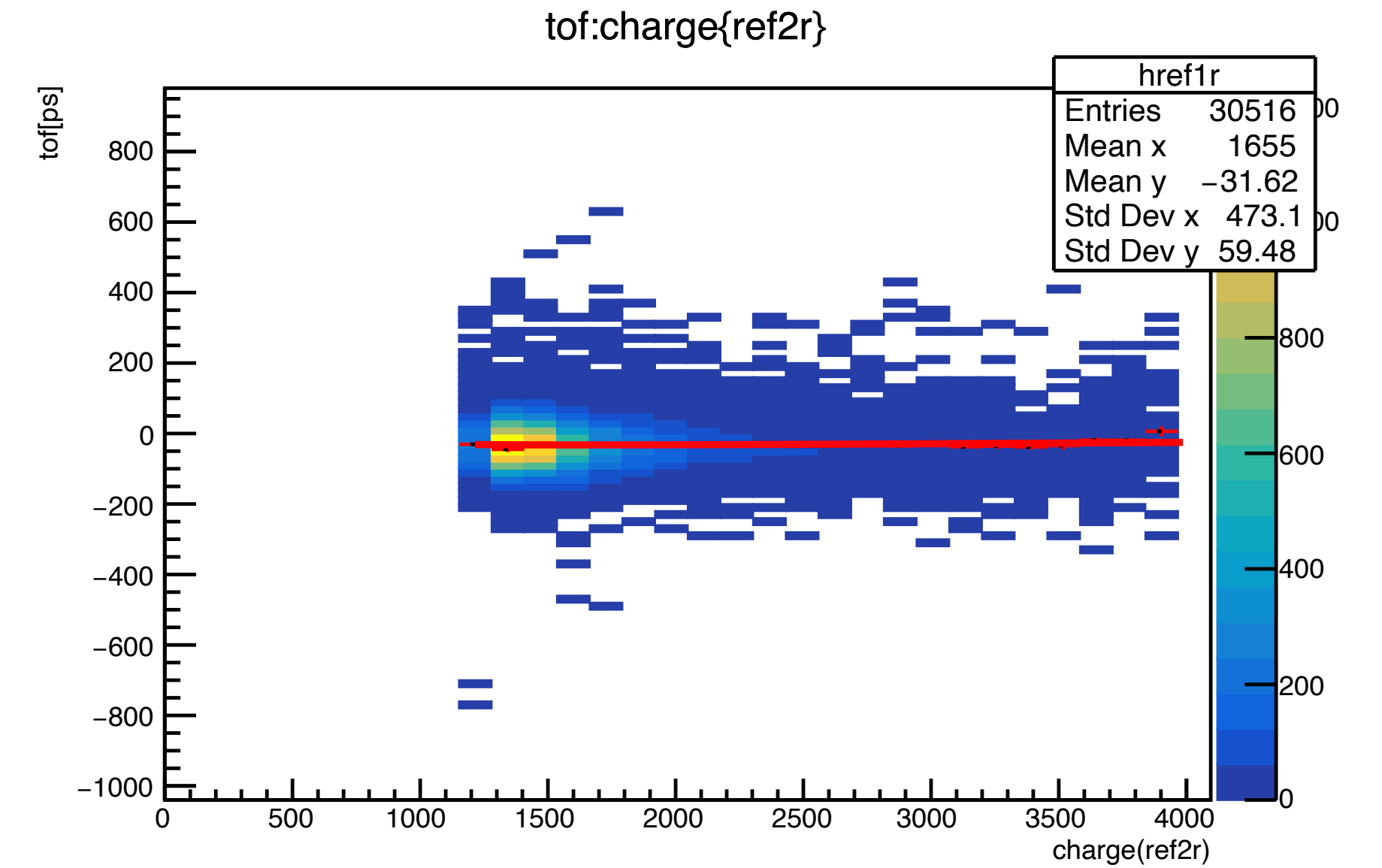
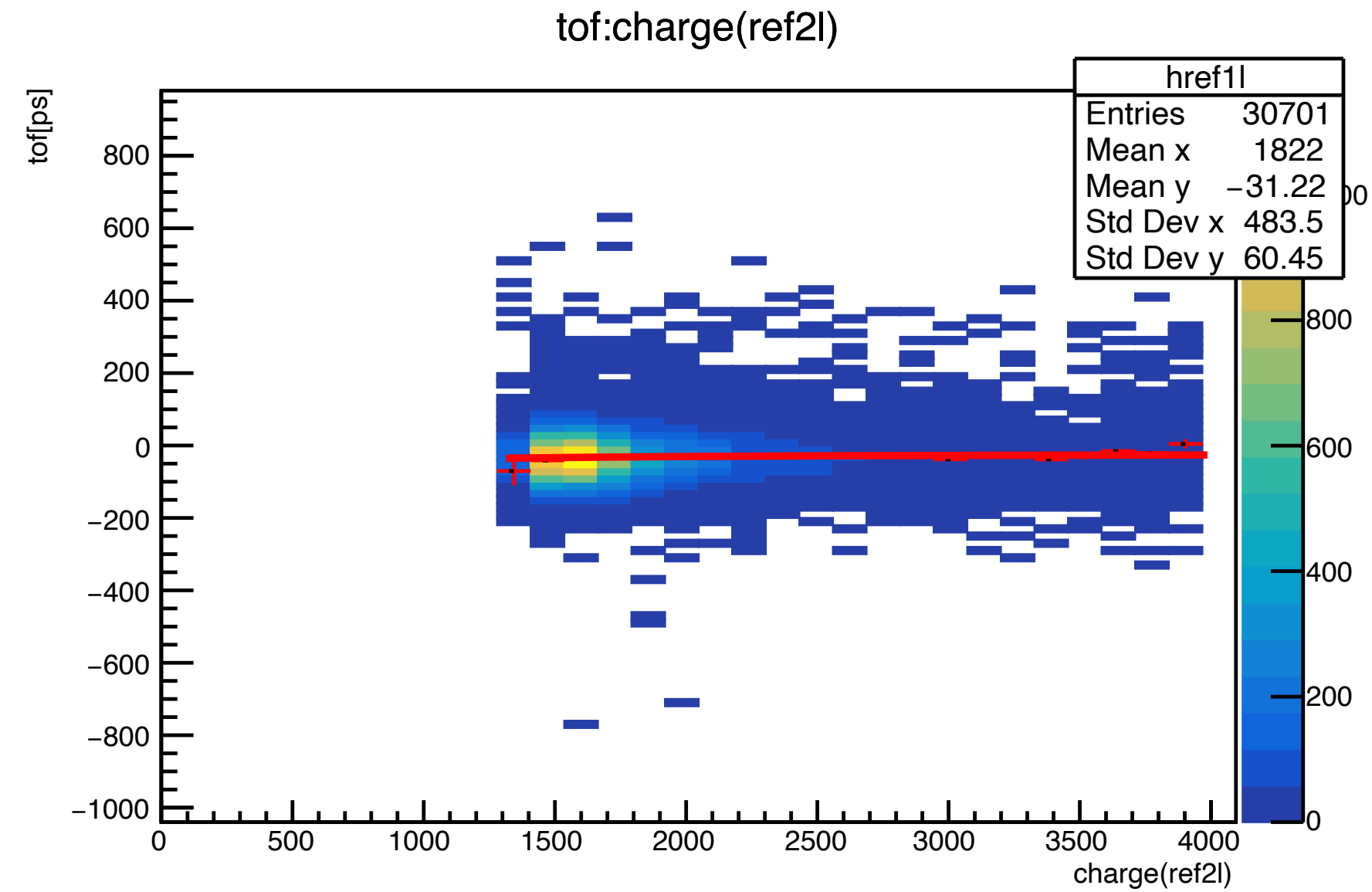
ref2 vs mppc



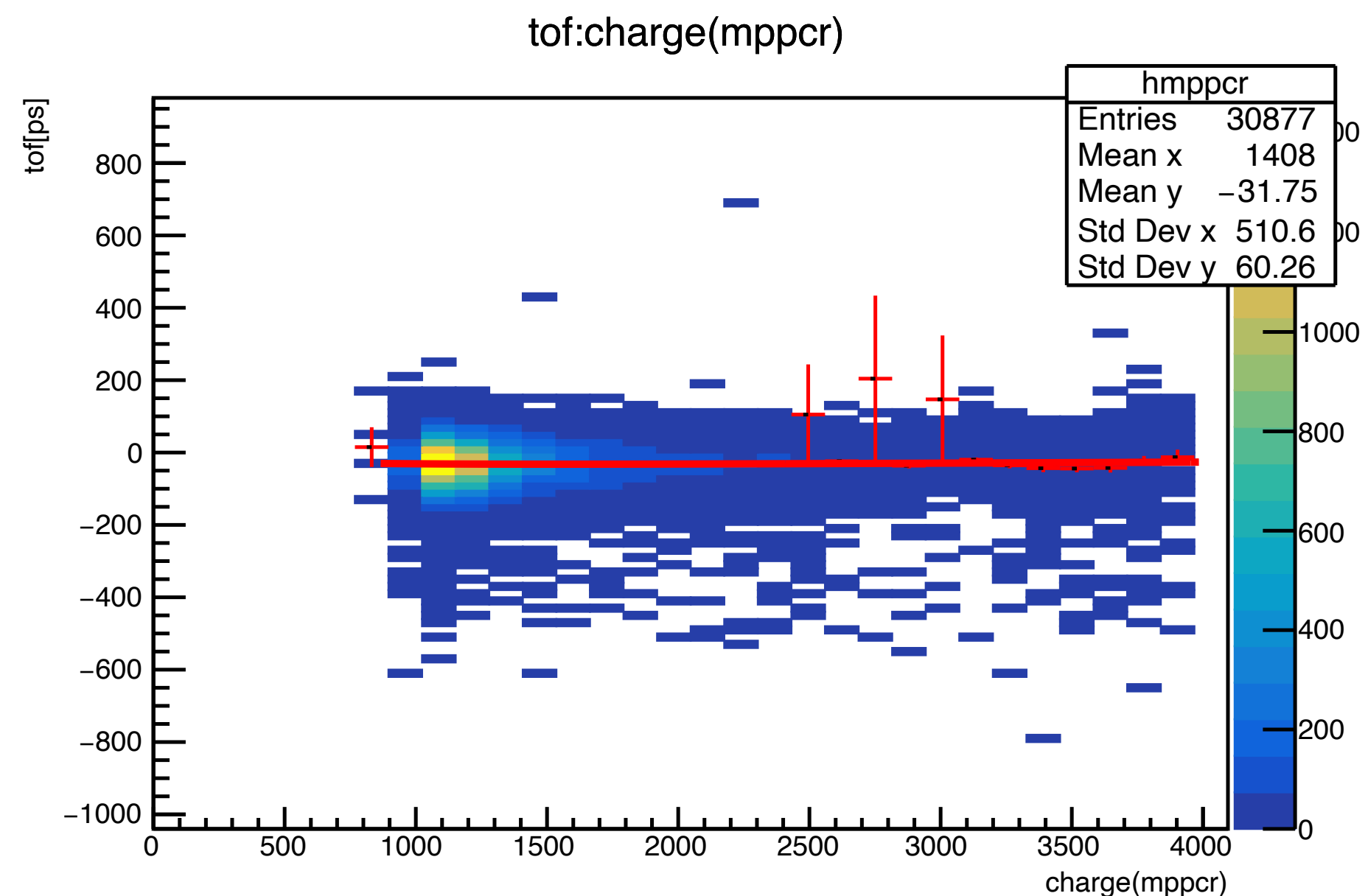
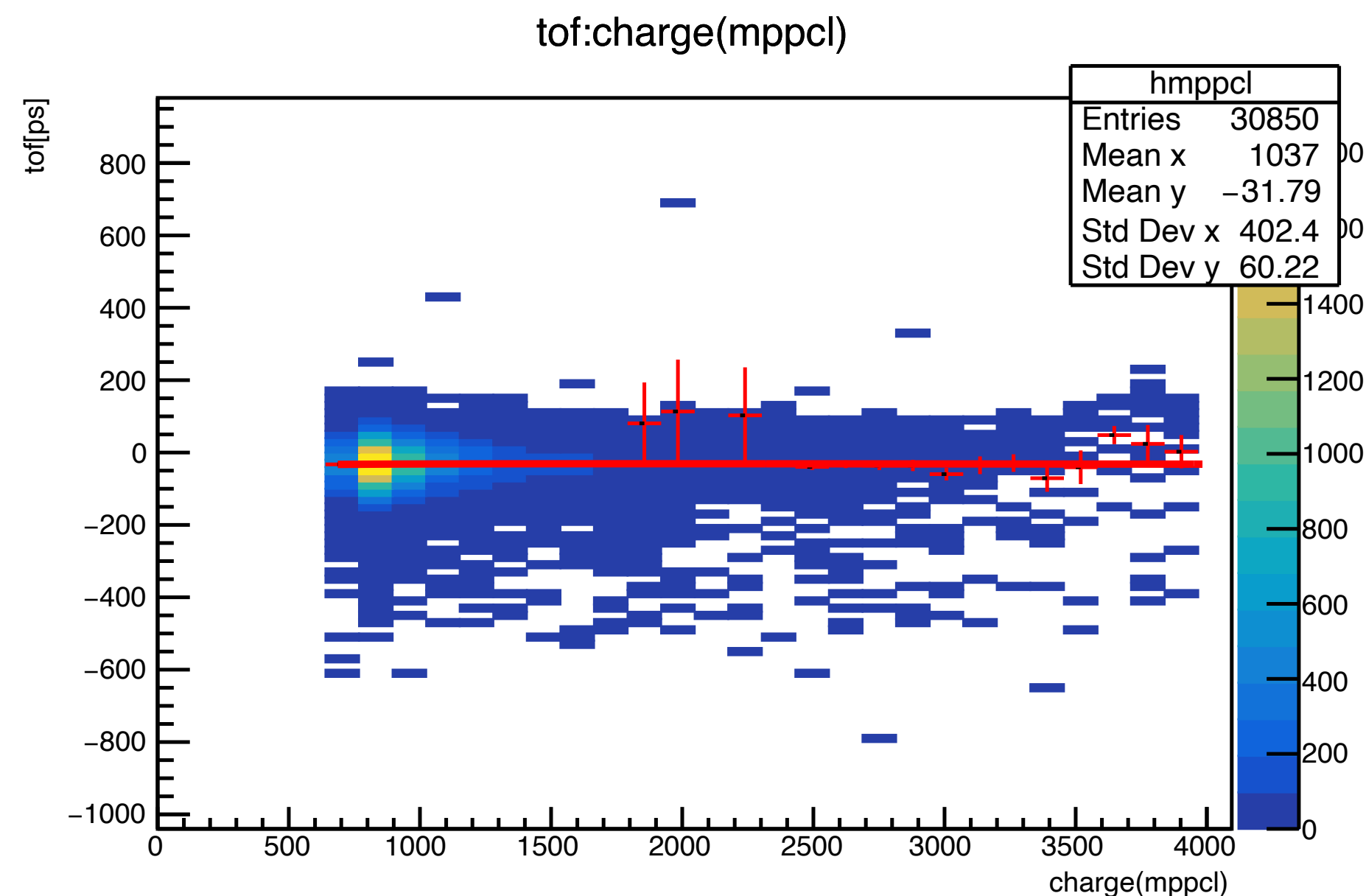
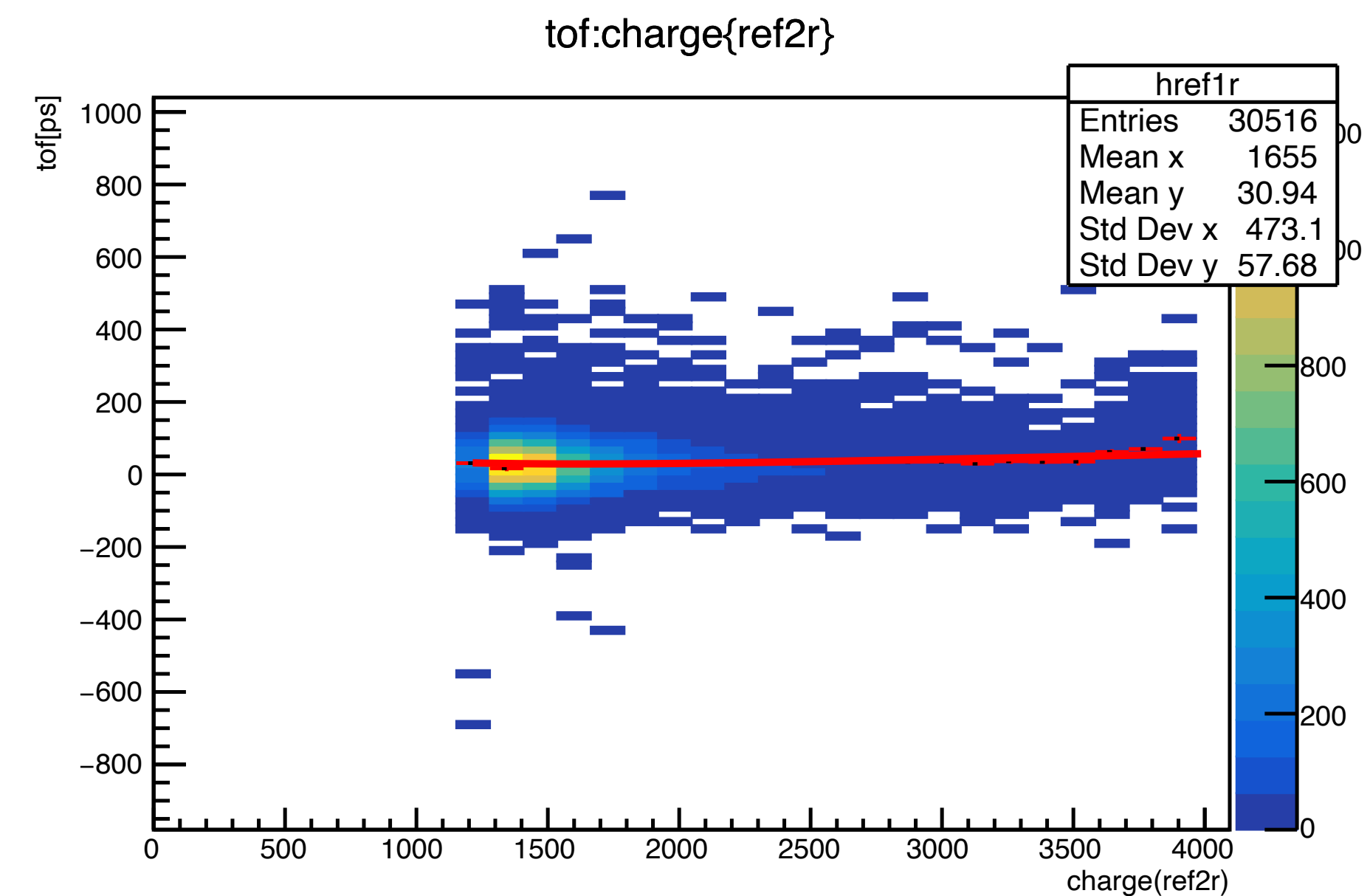
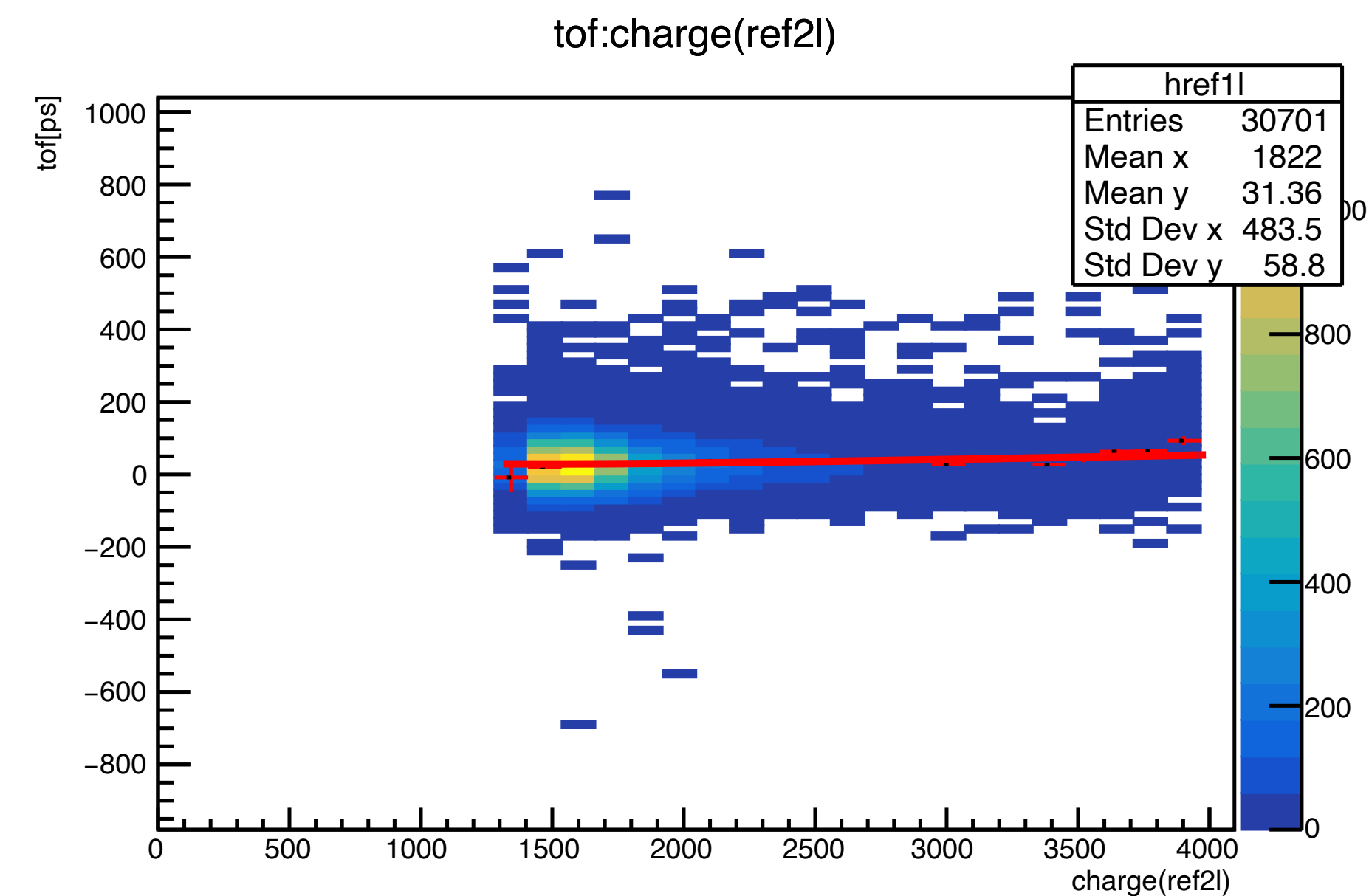
- slewing 1回目



- Slewing 2回目

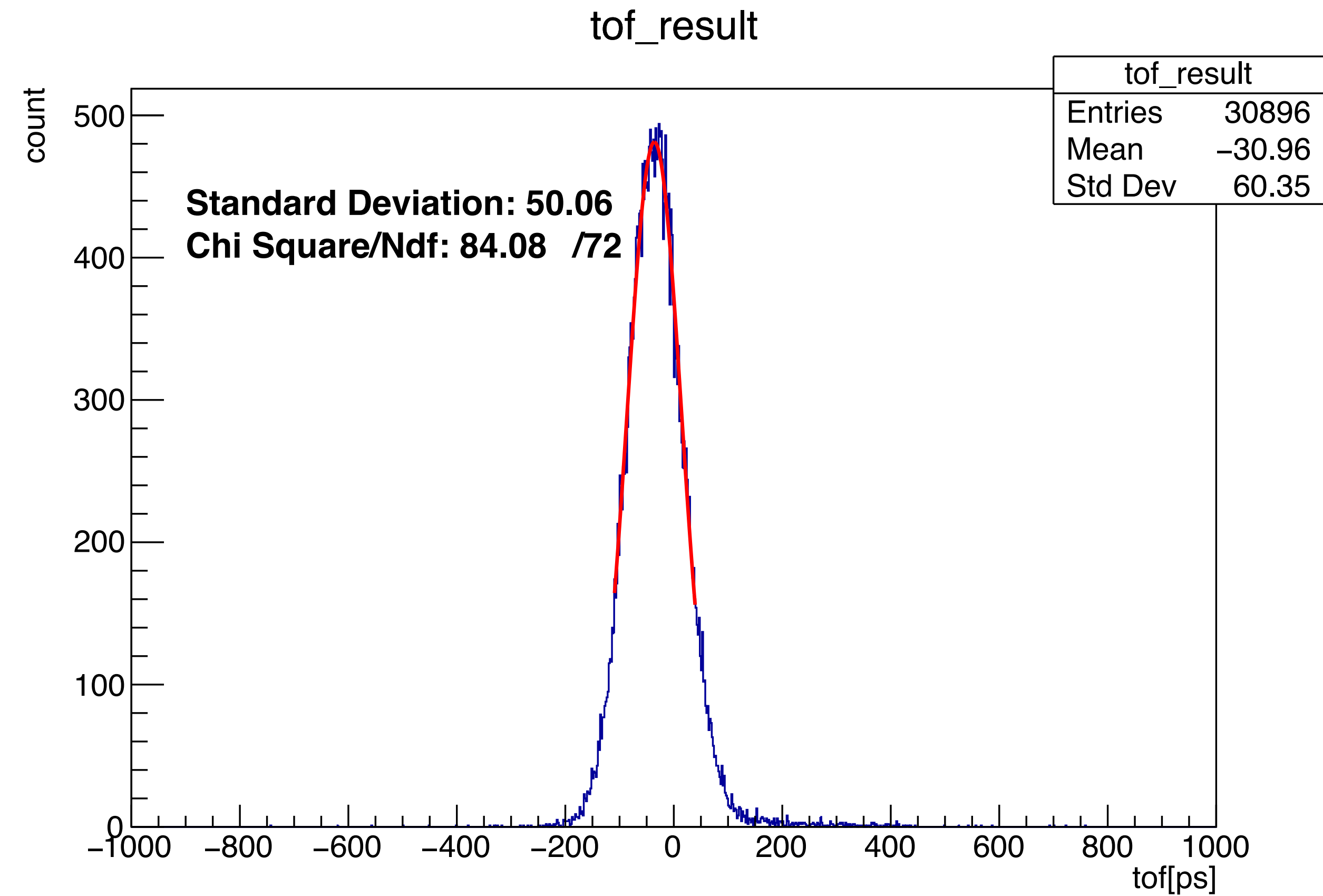
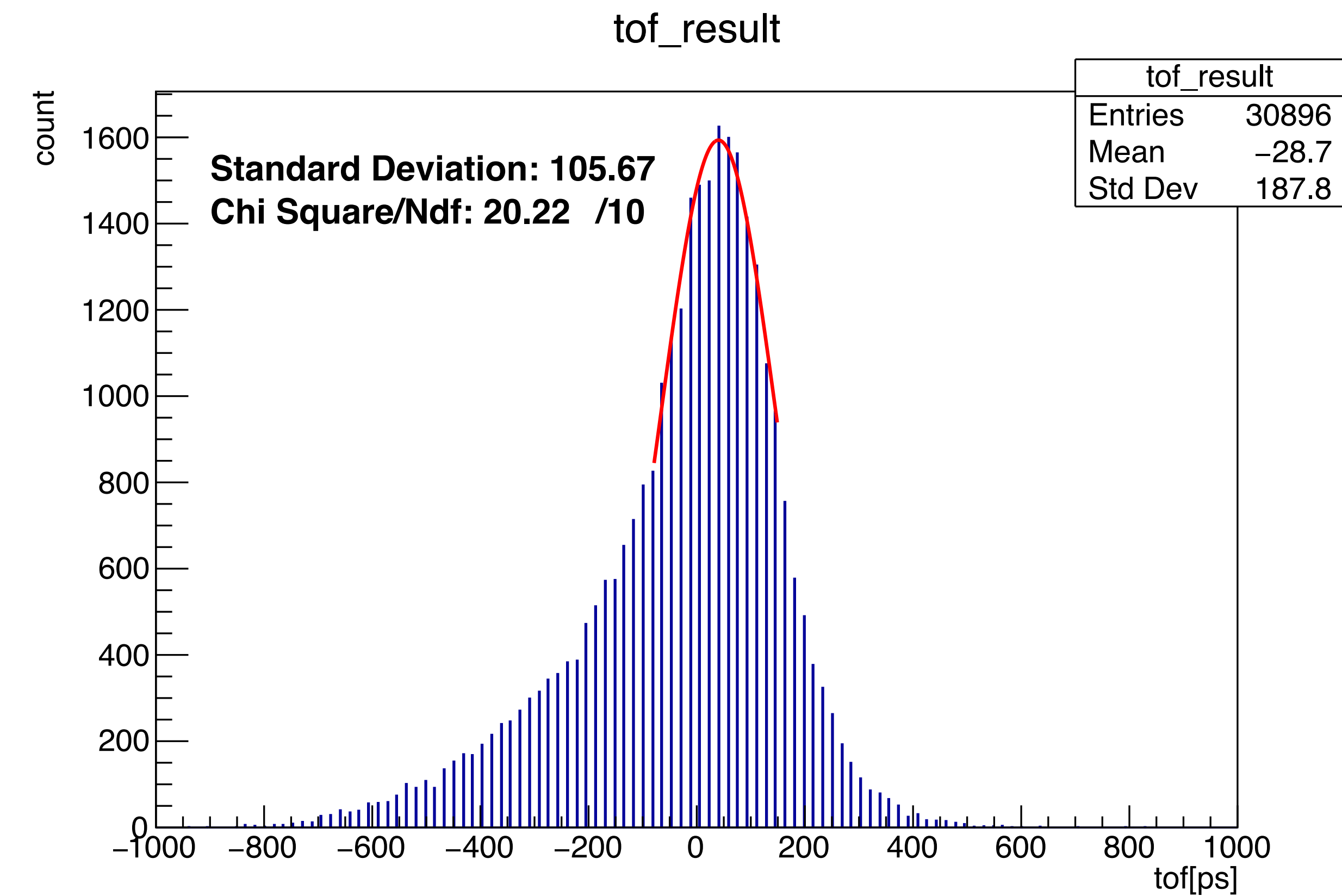


• Slewing 3回目



• slew前

slew後



- Ref1,2とmppcの時間分解能

$$43.5^2 = \sigma_{ref1}^2 + \sigma_{ref2}^2$$

$$53.2^2 = \sigma_{ref1}^2 + \sigma_{mppc}^2$$

$$50.0^2 = \sigma_{ref2}^2 + \sigma_{mppc}^2$$

- $\longrightarrow \sigma_{ref1} = 33.3, \sigma_{ref2} = 28.0,$
 $\sigma_{mppc} = 41.1 \text{ [ps]}$

- 誤差評価は近日。解析中のfit parameterを見る限り、1%のオーダー。

- ・ 今後
- ・ テスト実験のための台作成(みすみ)