

# PID cuts for $Q_2 = 1.6, W = 3.08$

$F_\pi$  test vs changing  $-t_{\min}$

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# Run lists: $Q2 = 1.6$ , $W = 3.08$ , Target = LH2

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## (2022)Low Epsilon

SHMS Center ( $\theta = 5.50$ )

- ◆ 16403 - 16405
- ◆ 16408 - 16417

Dummy Runs ( $\theta = 5.50$ )

- ◆ 16418 - 16420

## Acceptance cuts

```
H.hod.goodstarttime == 1 &&
```

```
H.gtr.dp > -8 && H.gtr.dp < 8 &&
```

```
H.gtr.th > -0.08 && H.gtr.th < 0.08 &&
```

```
H.gtr.ph > -0.045 && H.gtr.ph < 0.045 &&
```

```
P.hod.goodstarttime == 1 &&
```

```
P.gtr.dp > -10 && P.gtr.dp < 20 &&
```

```
P.gtr.th > -0.06 && P.gtr.th < 0.06 &&
```

```
P.gtr.ph > -0.04 && P.gtr.ph < 0.04
```

## Cointime cuts

```
CTime.ePiCoinTime_ROC1 > -2 && CTime.ePiCoinTime_ROC1 < 2
```

- Have Not applied the cointime prompt peak shift yet.

## PID cuts

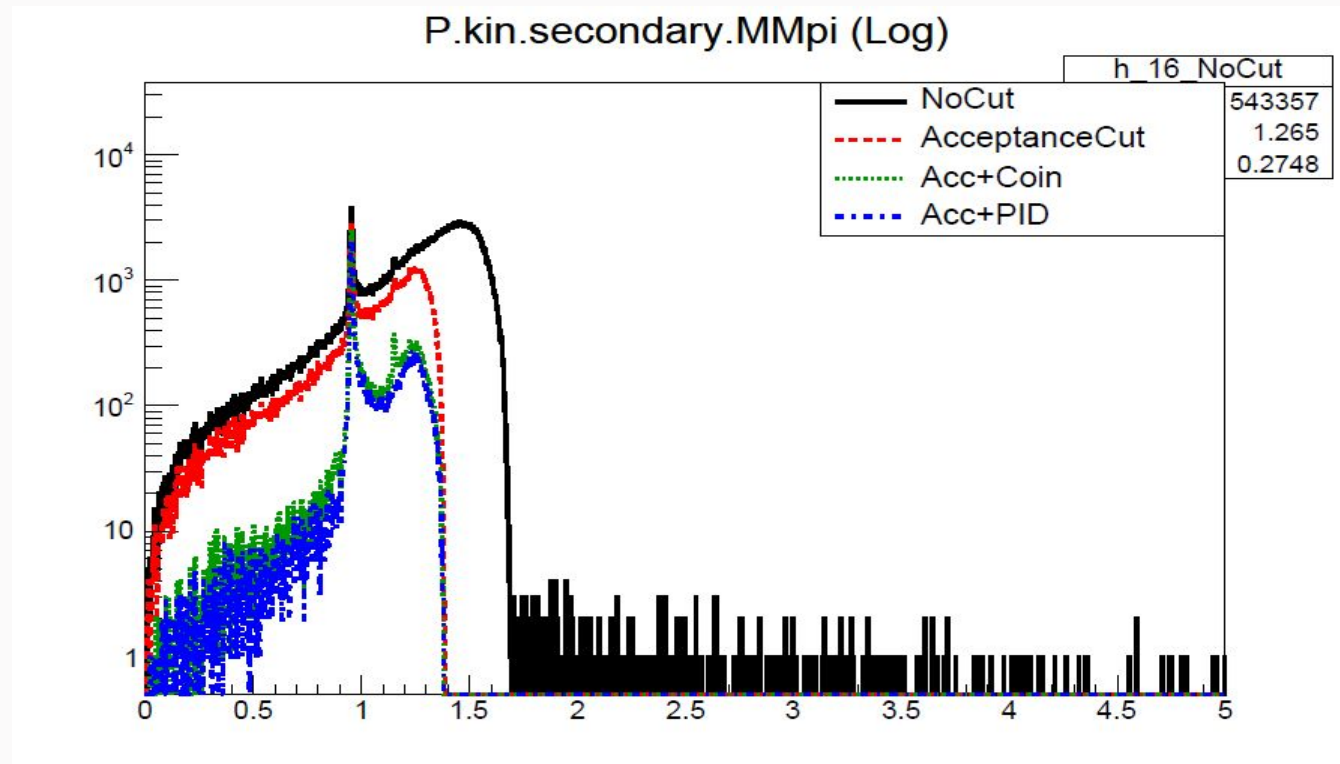
```
H.cer.npeSum > 1.5 &&
```

```
H.cal.etottracknorm > 0.7 &&
```

```
P.aero.npeSum > 0.1 &&
```

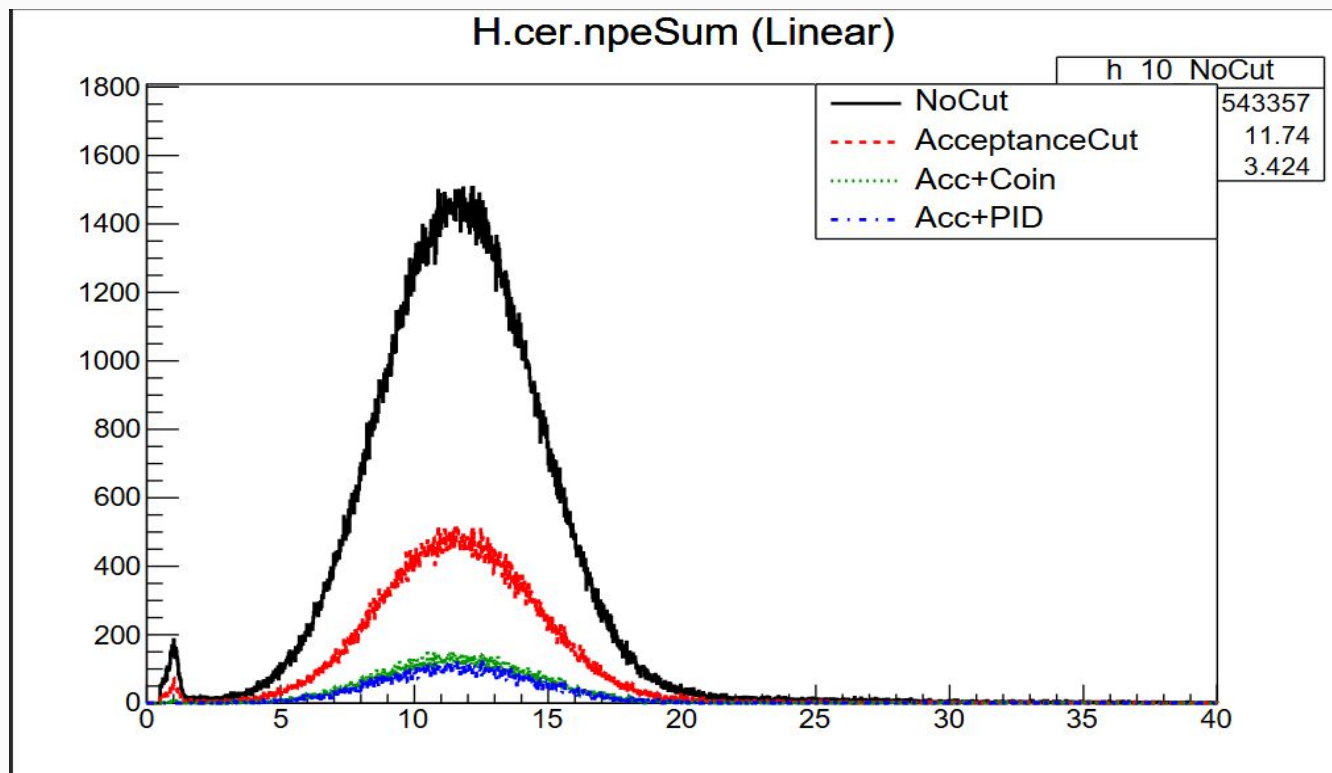
```
P.hgcer.npeSum > 0.1
```

# Missing mass with different cuts

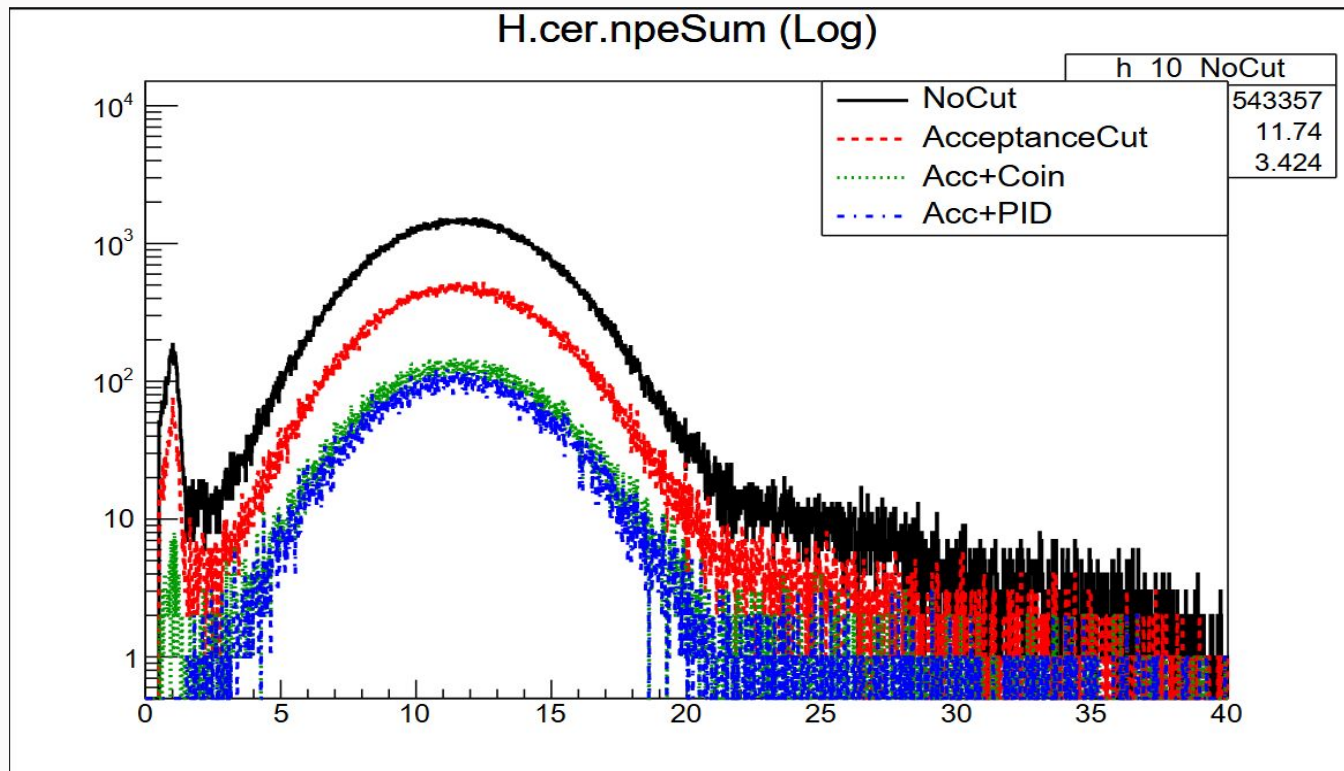


H.cer.npeSum > 1.5

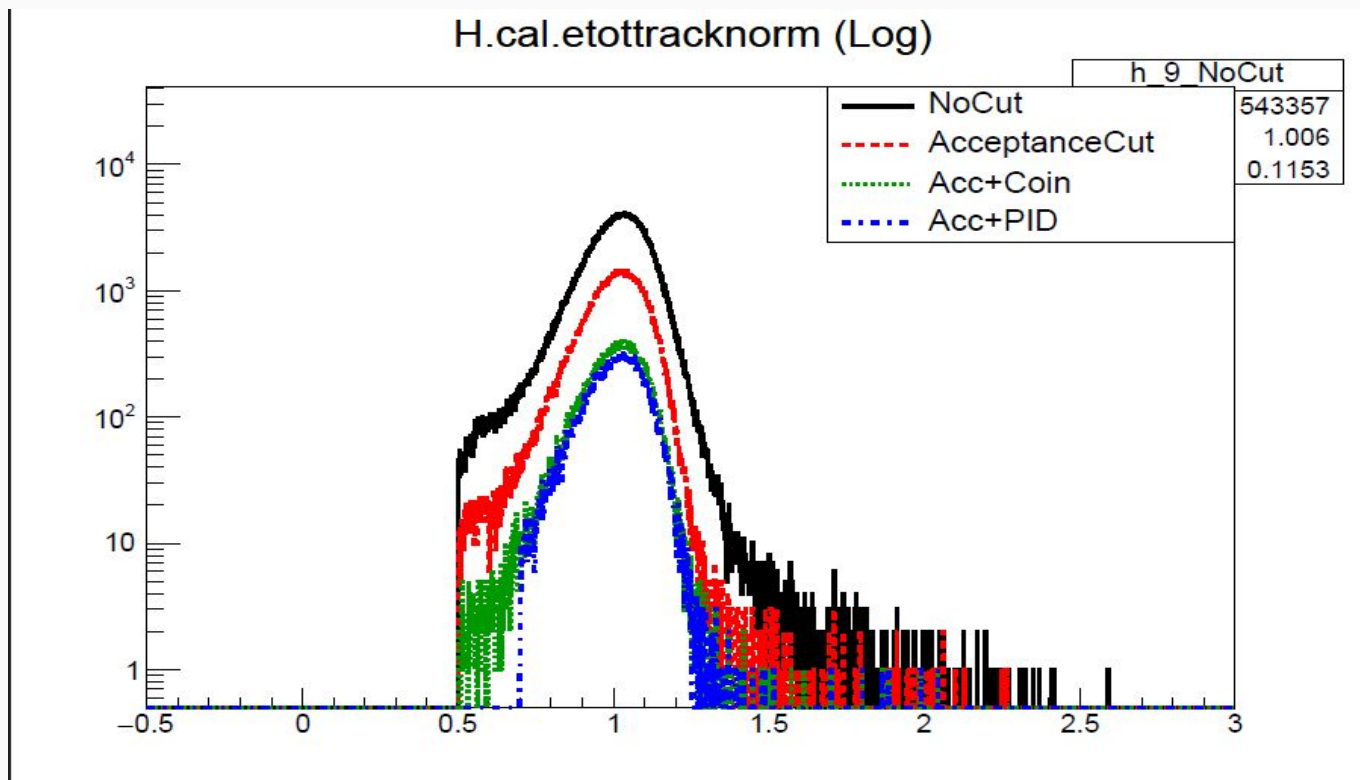
HMS cuts



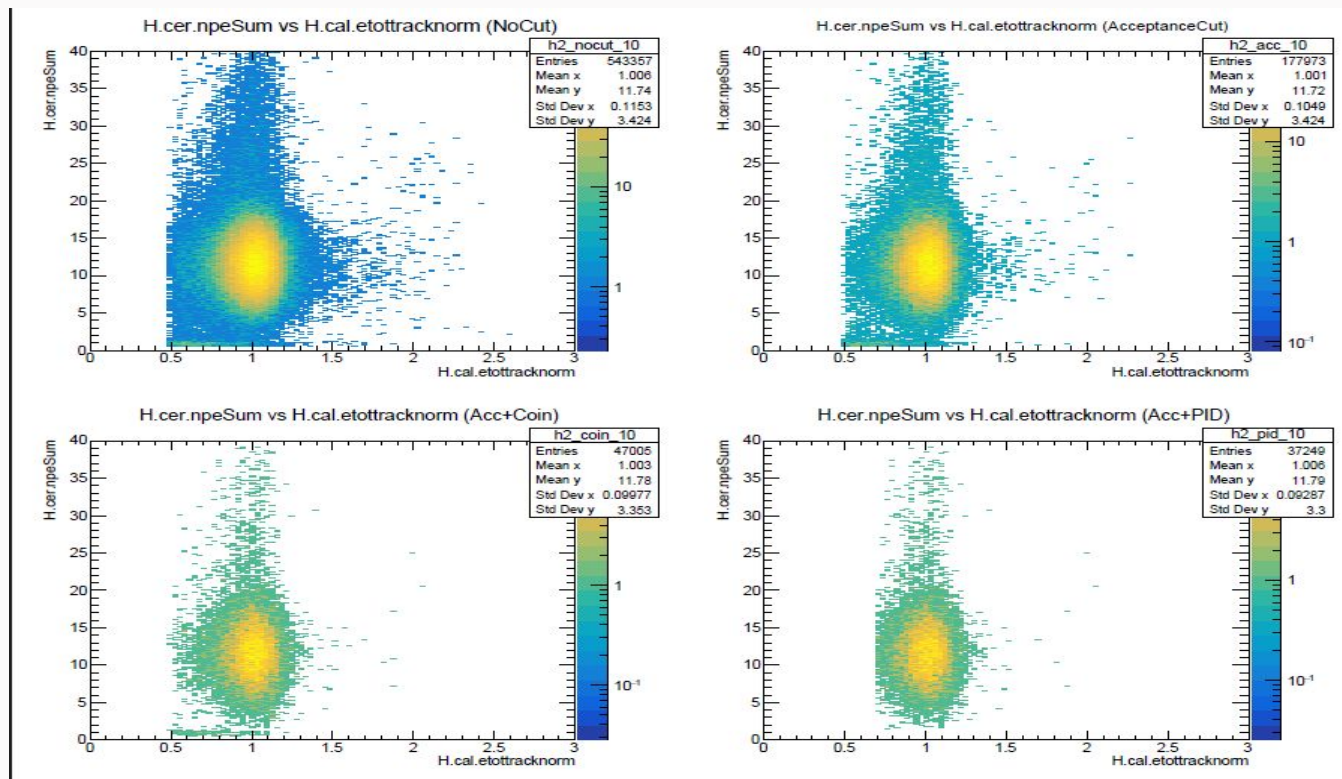
H.cer.npeSum > 1.5



H.cal.etottracknorm > 0.7

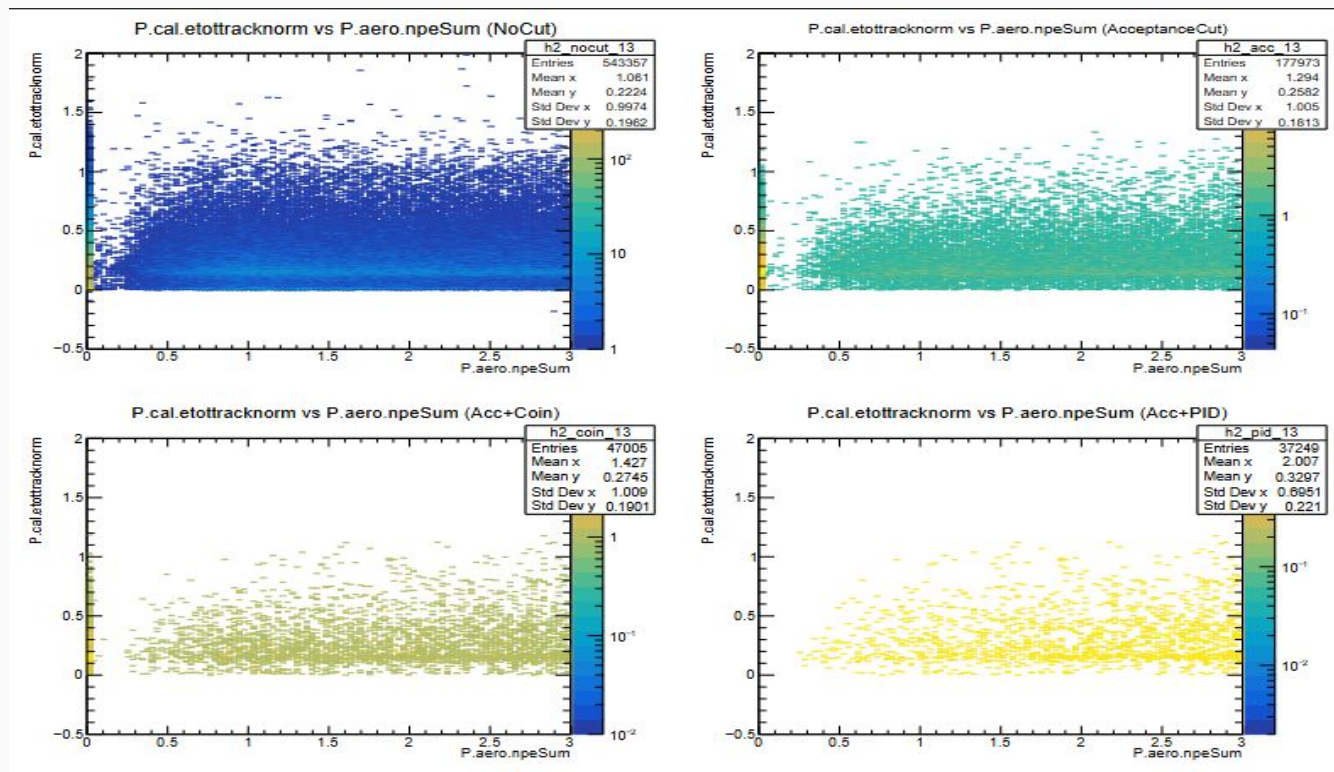


$H.cer.npeSum > 1.5 \ \&\& \ H.cal.etottracknorm > 0.7$



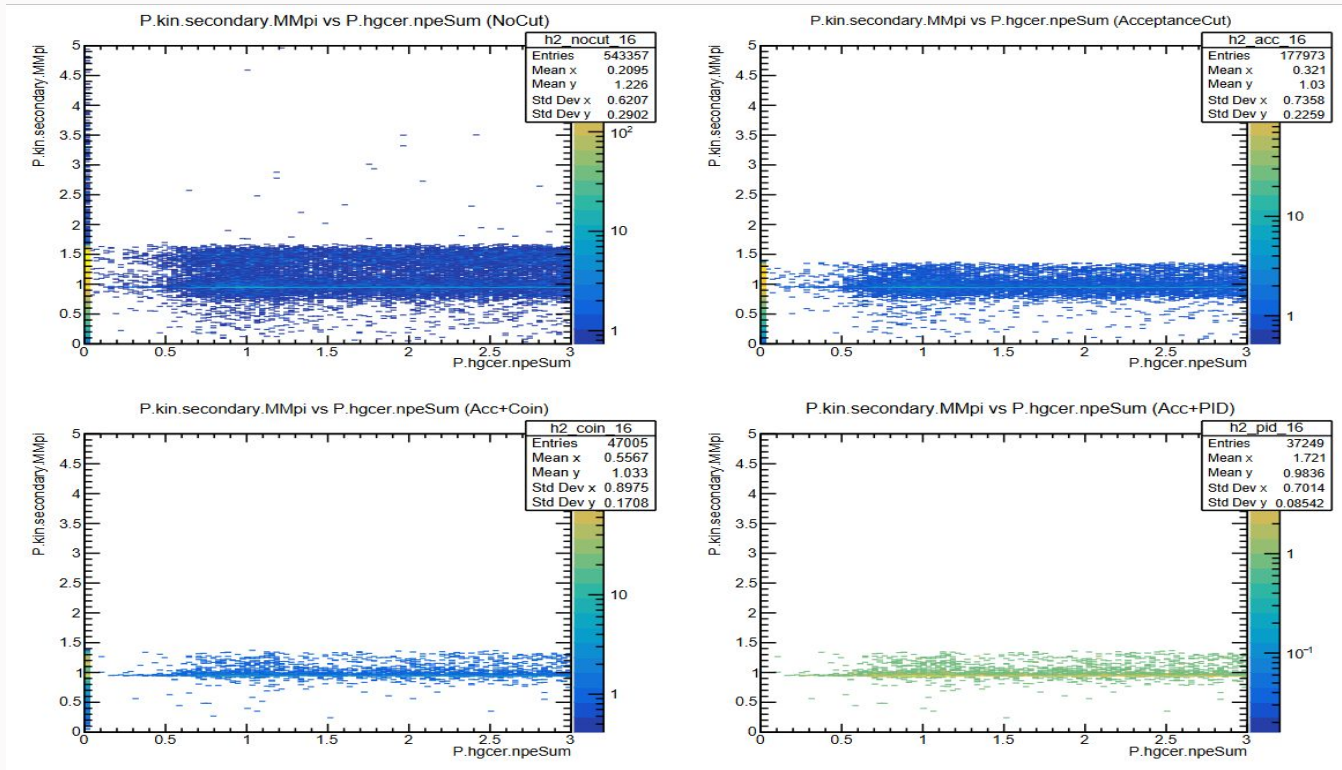
$P.aero.npeSum > 0.1$

SHMS cuts

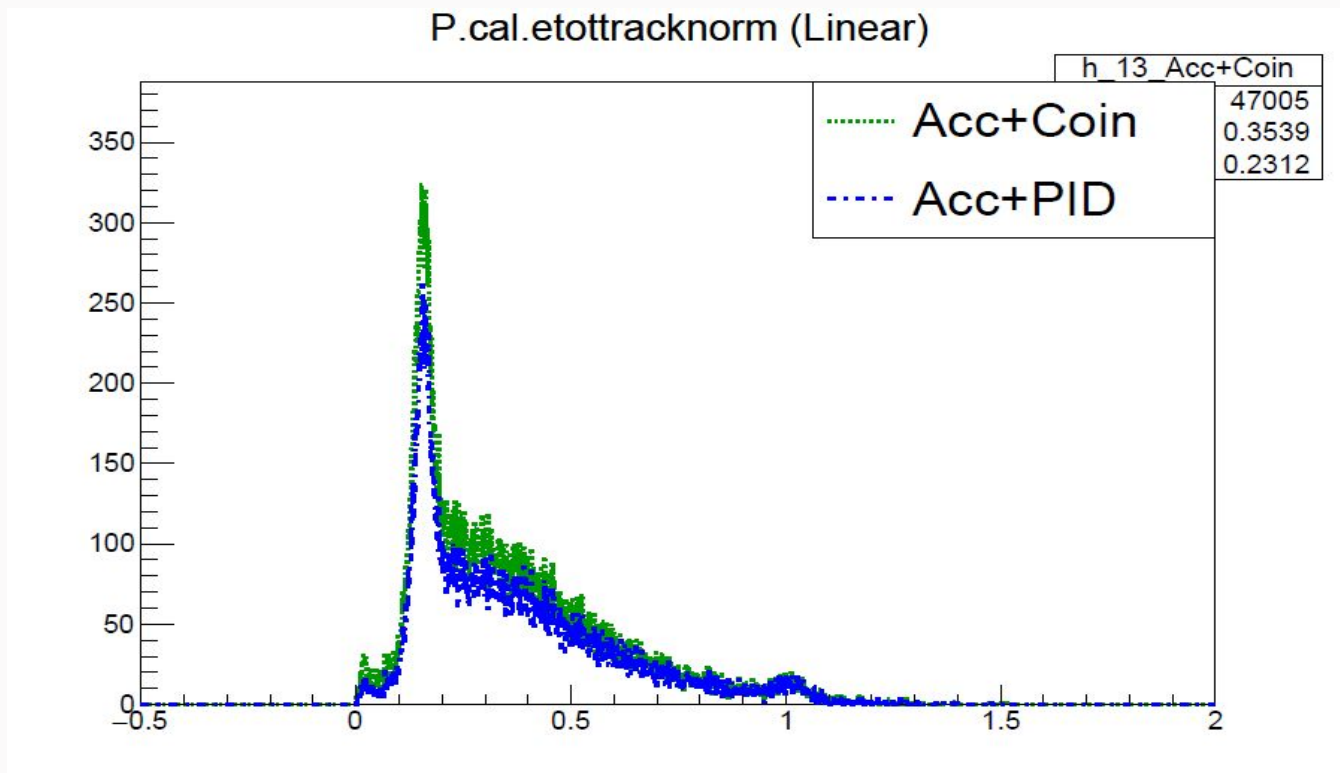


$P_{\text{aero.npeSum}} > 0.1$

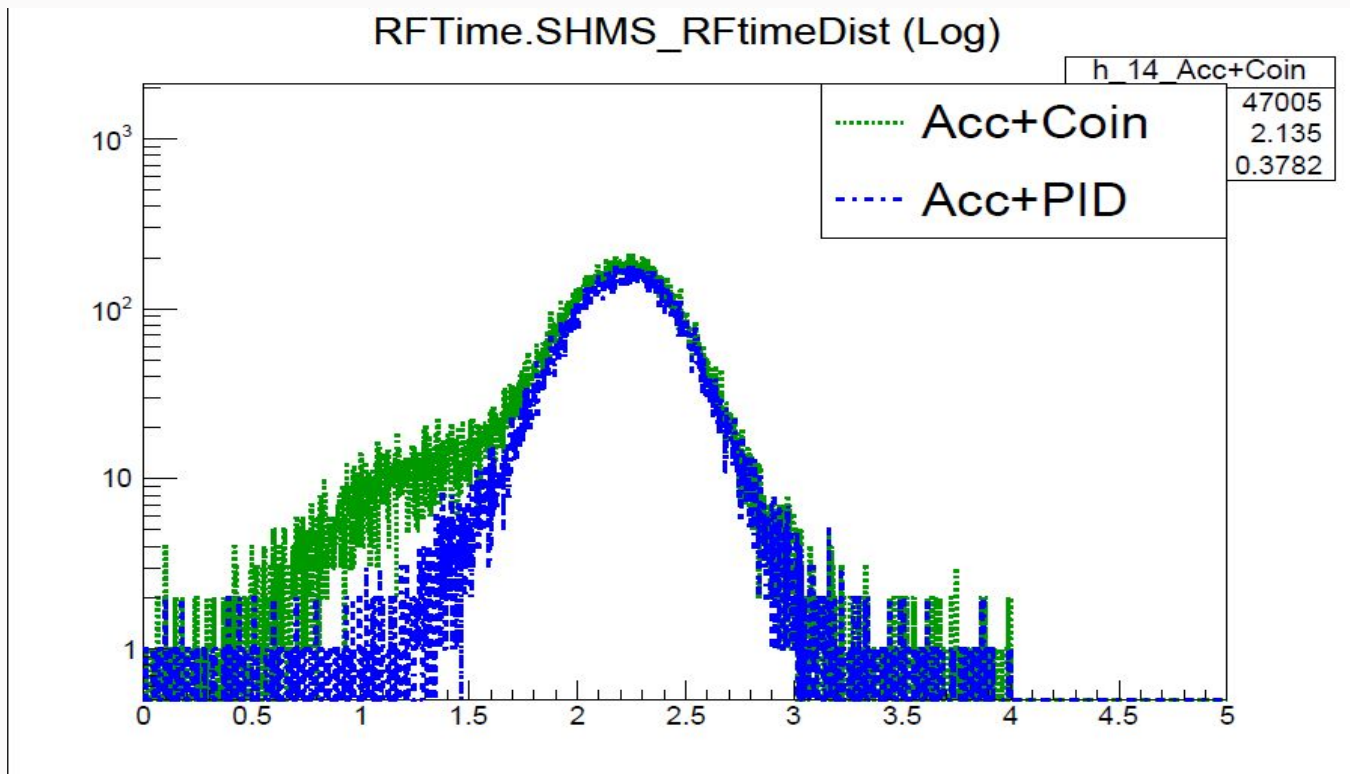
SHMS cuts



No cut on the calorimeter!



No RF time cut!



# Next steps:

1. Background subtraction
2. Effective charge normalization.

