Hodoscope Calibration

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 1
Entries = 65
$c_1 = 22.25 \pm 0.07$
$c_2 = 0.95 \pm 0.02$
χ^2/NDF = 12.71

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 2
Entries = 52
$c_1 = 23.08 \pm 0.06$
$c_2 = 0.86 \pm 0.03$
χ^2/NDF = 13.91

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 3
Entries = 57
$c_1 = 23.27 \pm 0.07$
$c_2 = 0.89 \pm 0.04$
χ^2/NDF = 12.95

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 4
Entries = 100
$c_1 = 19.45 \pm 0.05$
$c_2 = 0.95 \pm 0.02$
χ^2/NDF = 13.68

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 5
Entries = 85
$c_1 = 19.10 \pm 0.06$
$c_2 = 0.85 \pm 0.02$
χ^2/NDF = 12.67

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 6
Entries = 113
$c_1 = 22.99 \pm 0.04$
$c_2 = 0.97 \pm 0.03$
χ^2/NDF = 11.92

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 7
Entries = 132
$c_1 = 23.19 \pm 0.04$
$c_2 = 0.95 \pm 0.02$
χ^2/NDF = 8.47

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 8
Entries = 128
$c_1 = 22.93 \pm 0.05$
$c_2 = 0.93 \pm 0.02$
χ^2/NDF = 12.95

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 9
Entries = 178
$c_1 = 23.41 \pm 0.04$
$c_2 = 0.87 \pm 0.02$
χ^2/NDF = 13.01

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 10
Entries = 193
$c_1 = 23.62 \pm 0.04$
$c_2 = 0.92 \pm 0.01$
χ^2/NDF = 13.77

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 11
Entries = 168
$c_1 = 20.13 \pm 0.06$
$c_2 = 1.00 \pm 0.02$
χ^2/NDF = 22.82

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 12
Entries = 159
$c_1 = 23.43 \pm 0.07$
$c_2 = 1.30 \pm 0.02$
χ^2/NDF = 44.35

TDC-ADC Time vs. Pulse Amp Plane 1x Side neg Paddle 13
Entries = 219
$c_1 = 23.49 \pm 0.04$
$c_2 = 0.74 \pm 0.02$
χ^2/NDF = 12.91

- Time Walk correction
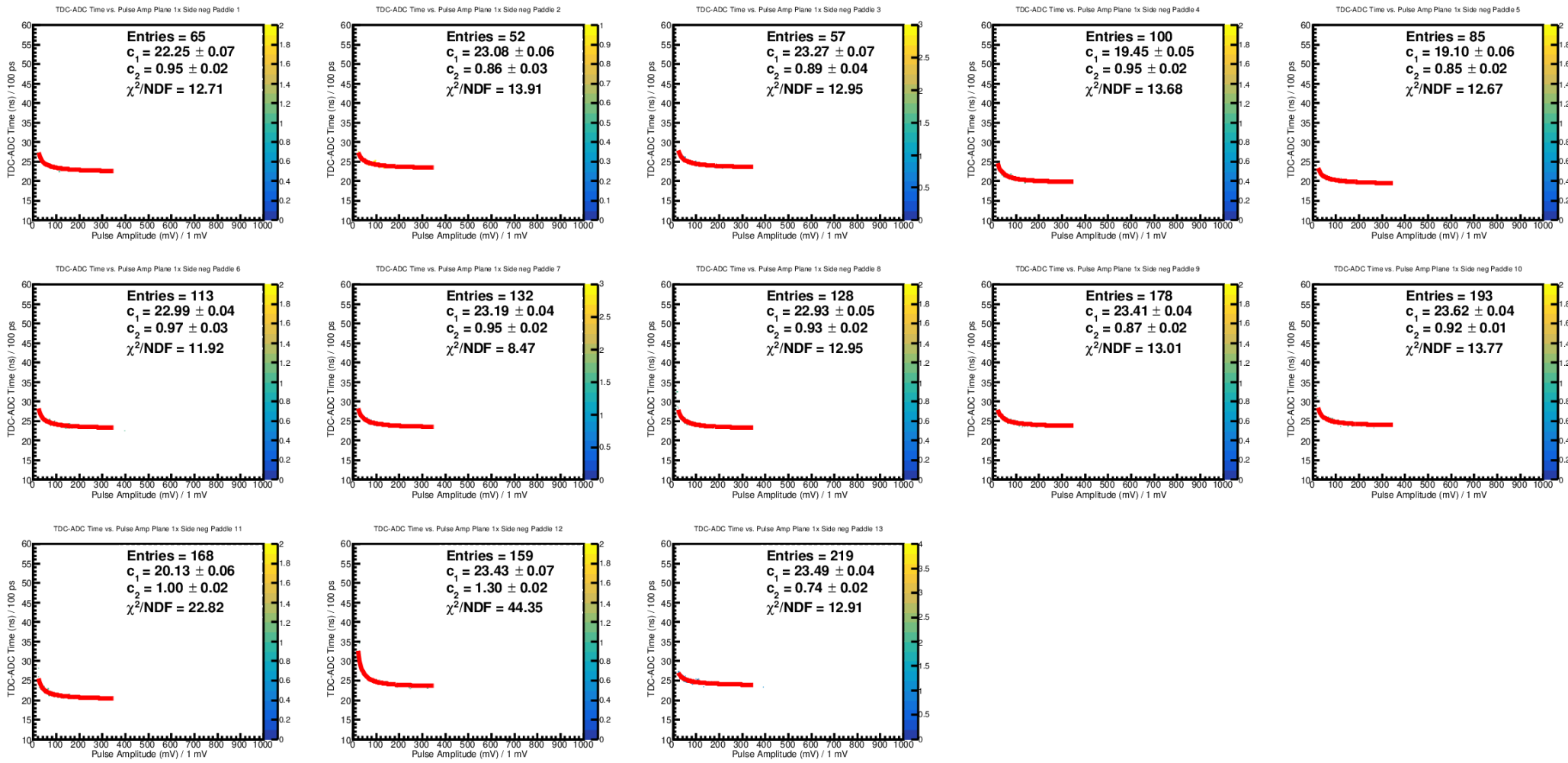- TDC-ADC pulse time difference vs Pulse amplitude :1xNeg

Hodoscope Calibration
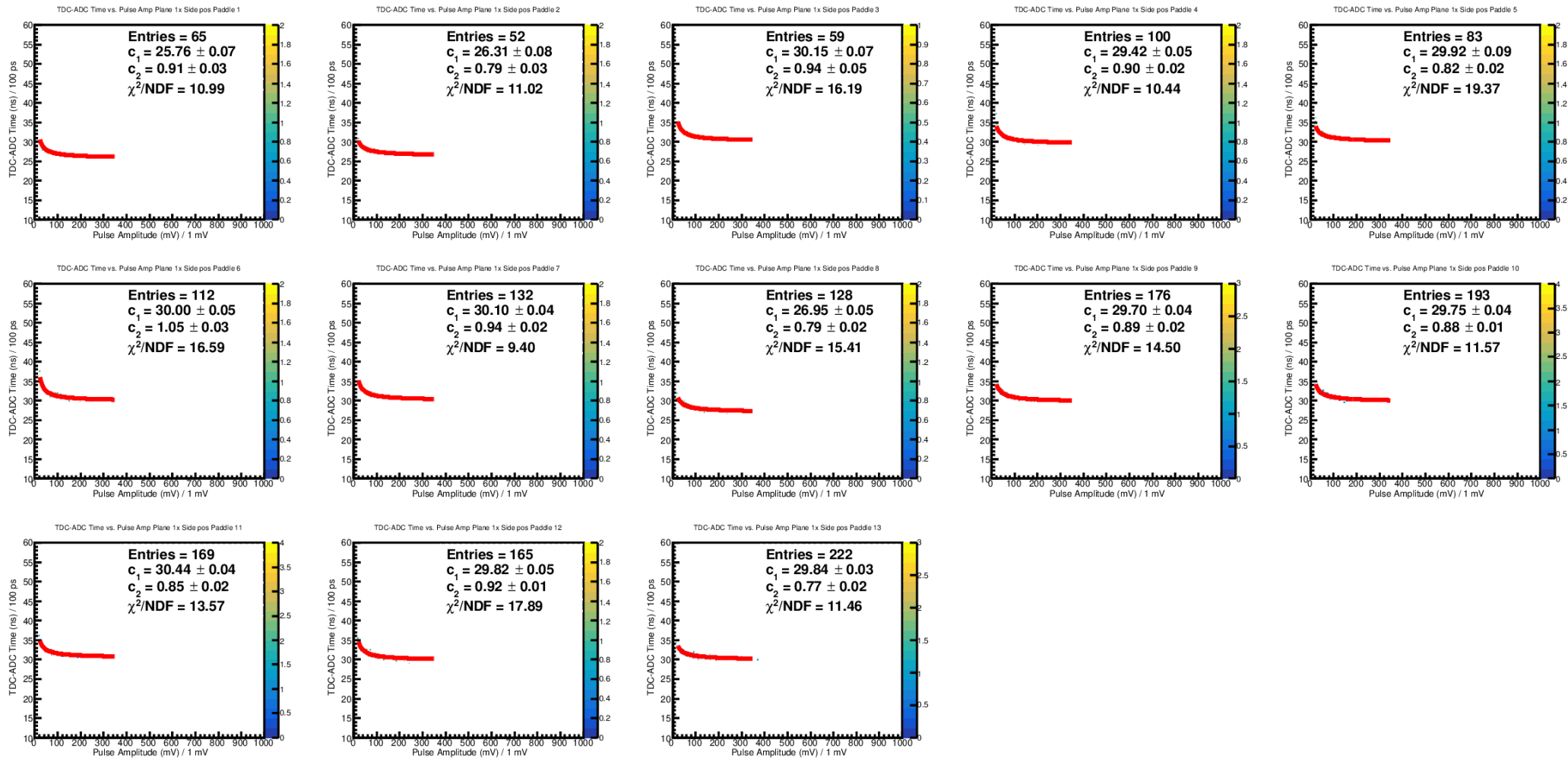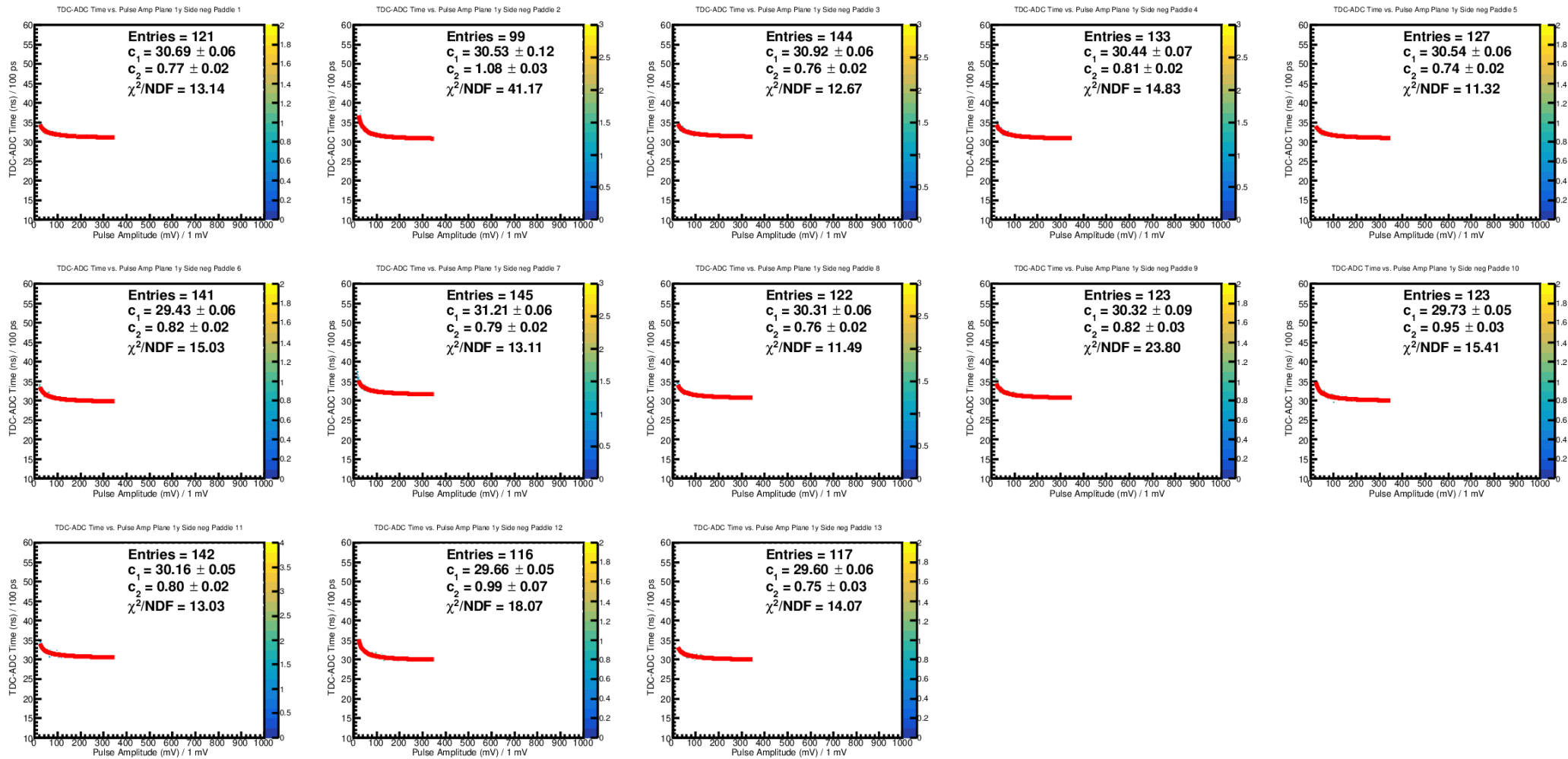
- SHMS 10604: cosmic run
- E_p=3.4 GeV, 30°
- Trigger: 3/4 (pTRIG1)

- Time Walk correction
- TDC-ADC pulse time difference vs Pulse amplitude :1xPos

Hodoscope Calibration

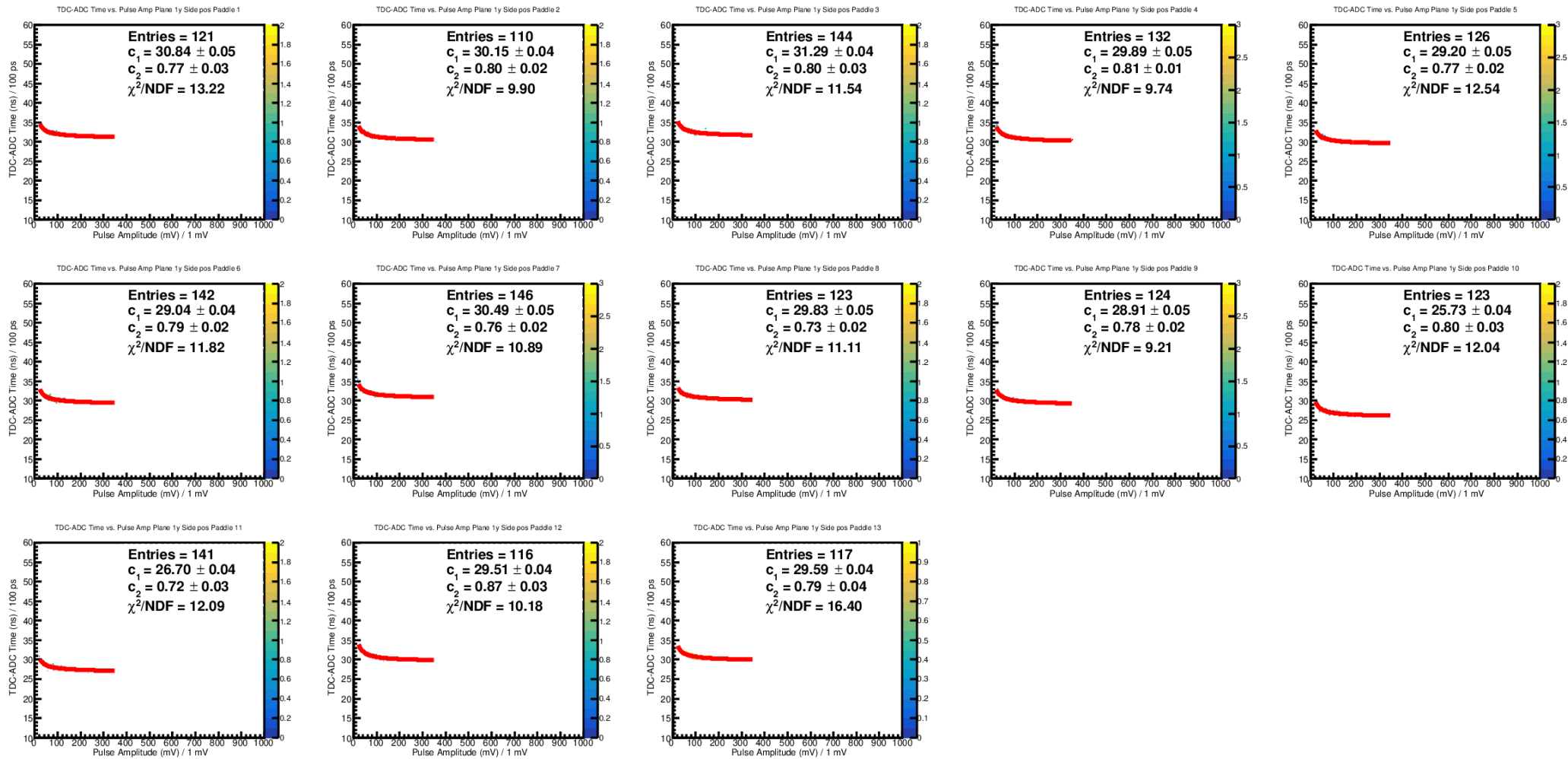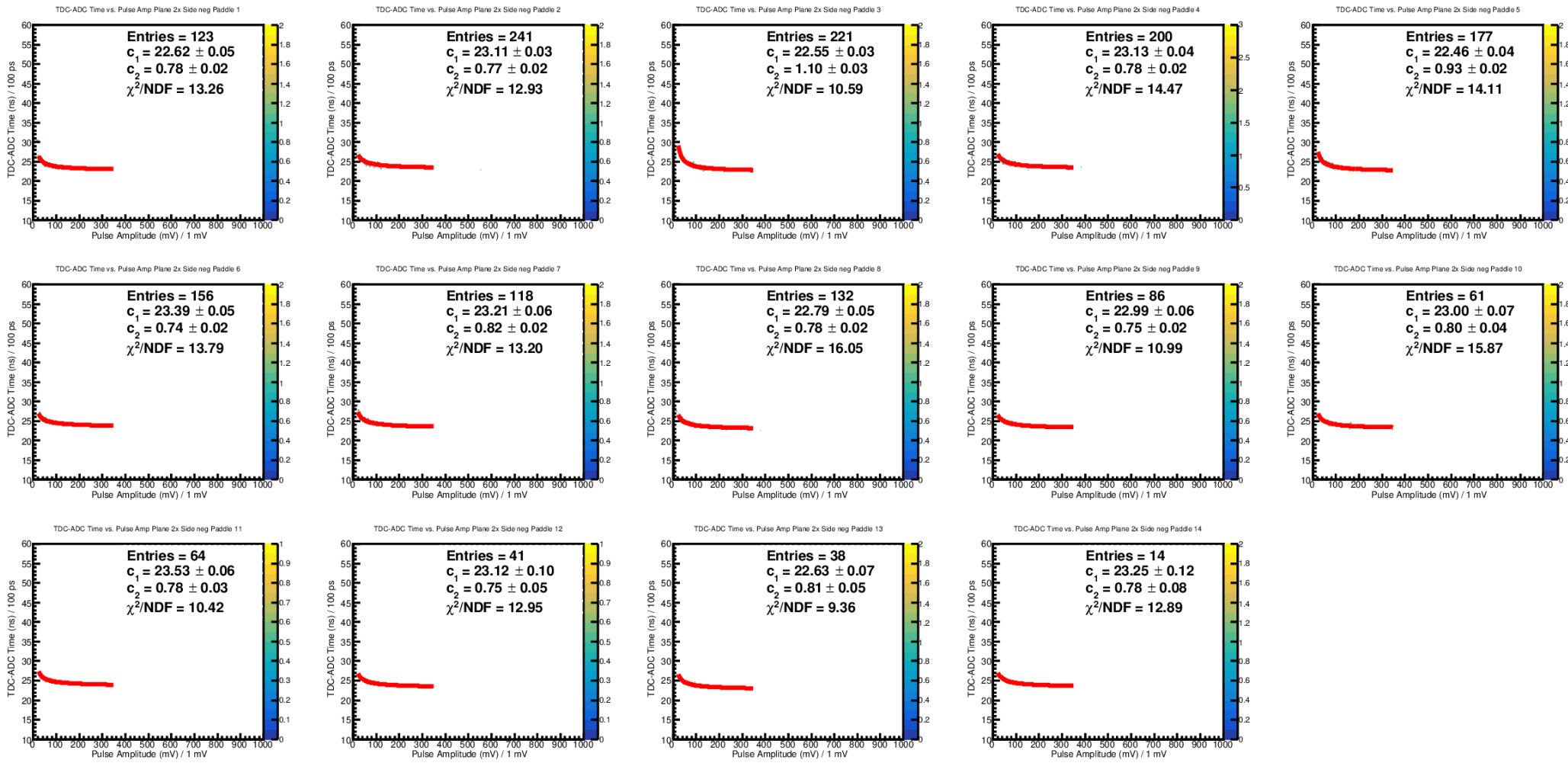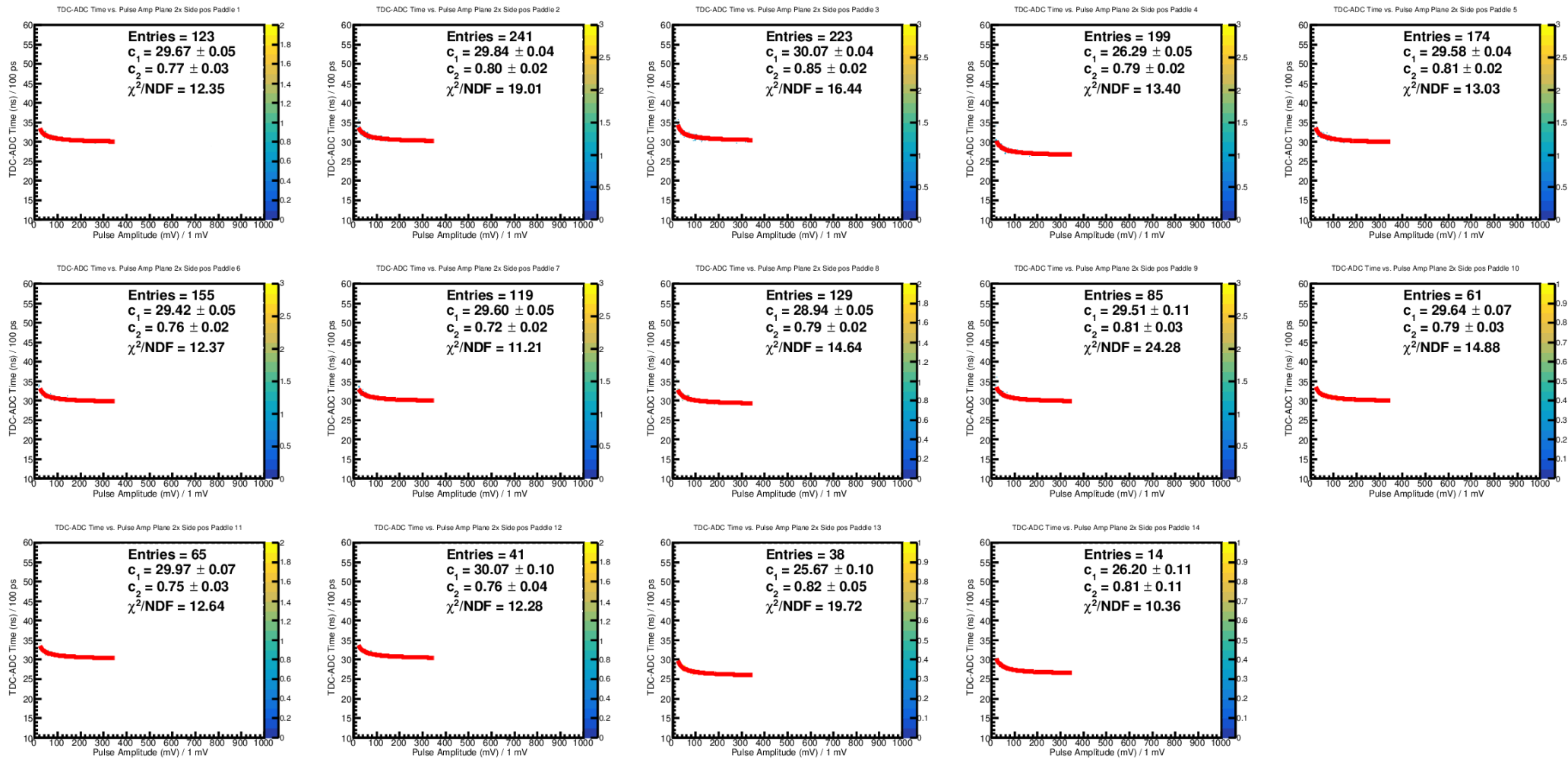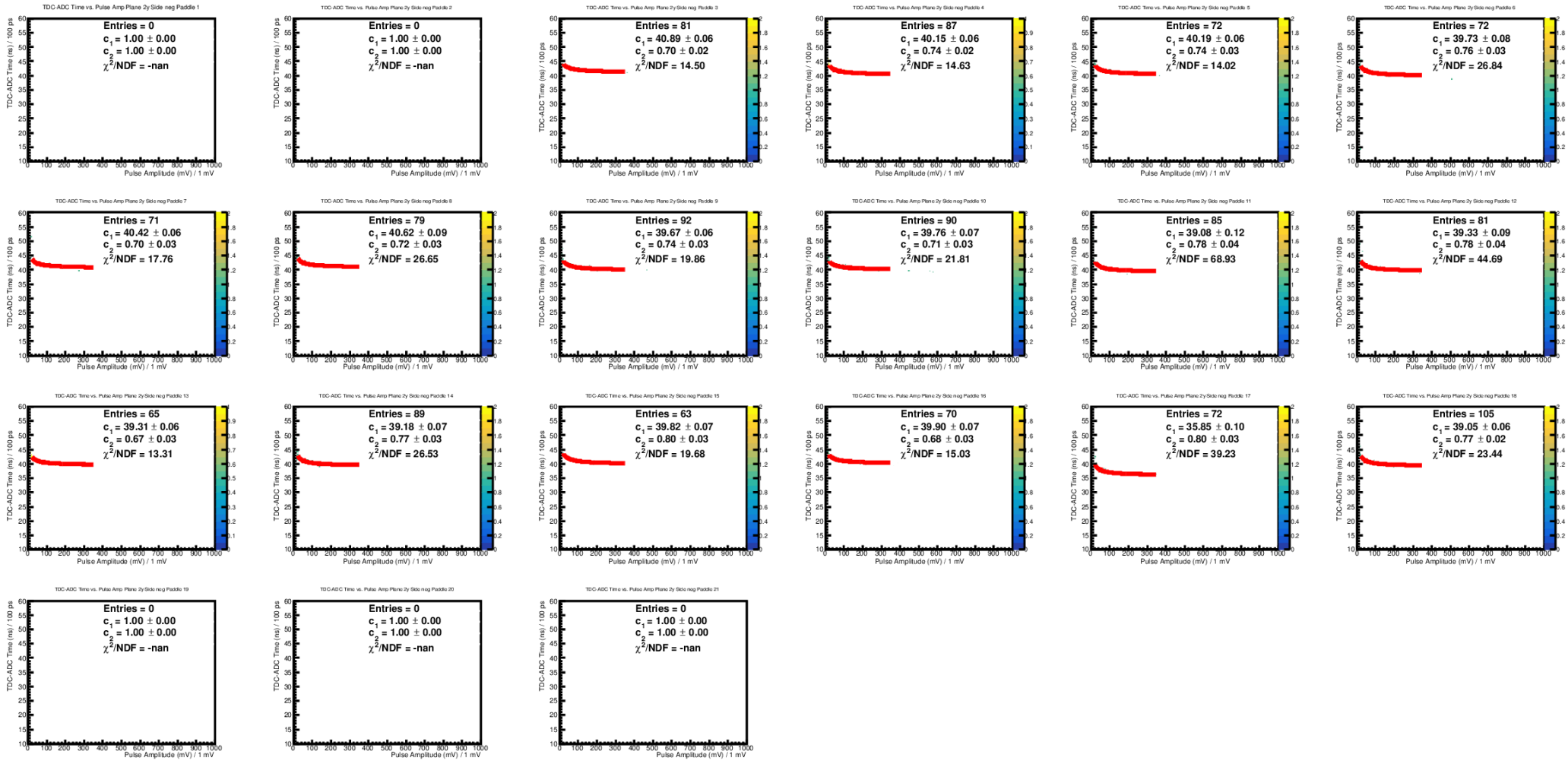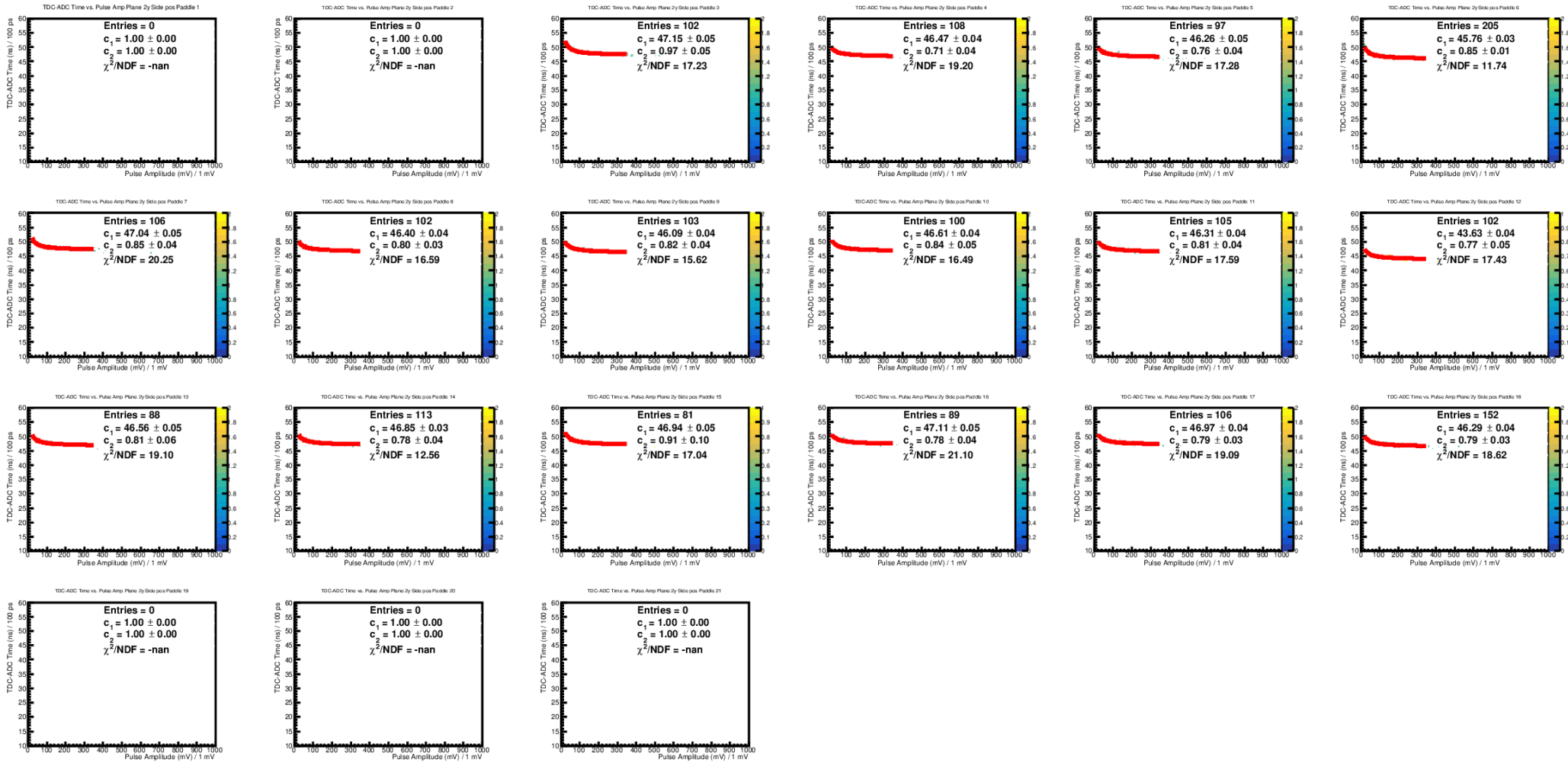- SHMS 10604: cosmic run
- E_p=3.4 GeV, 30°
- Trigger: 3/4 (pTRIG1)

- Time Walk correction
- TDC-ADC pulse time difference vs Pulse amplitude :1yNeg

Hodoscope Calibration

- Time Walk correction
- TDC-ADC pulse time difference vs Pulse amplitude :1yPos

Hodoscope Calibration

- Time Walk correction
- TDC-ADC pulse time difference vs Pulse amplitude :2xNeg

Hodoscope Calibration

- SHMS 10604: cosmic run
- E_p=3.4 GeV, 30°
- Trigger: 3/4 (pTRIG1)

- Time Walk correction
- TDC-ADC pulse time difference vs Pulse amplitude :2xPos

Hodoscope Calibration

- SHMS 10604: cosmic run
- E_p=3.4 GeV, 30°
- Trigger: 3/4 (pTRIG1)

- Time Walk correction
- TDC-ADC pulse time difference vs Pulse amplitude :2yNeg

Hodoscope Calibration

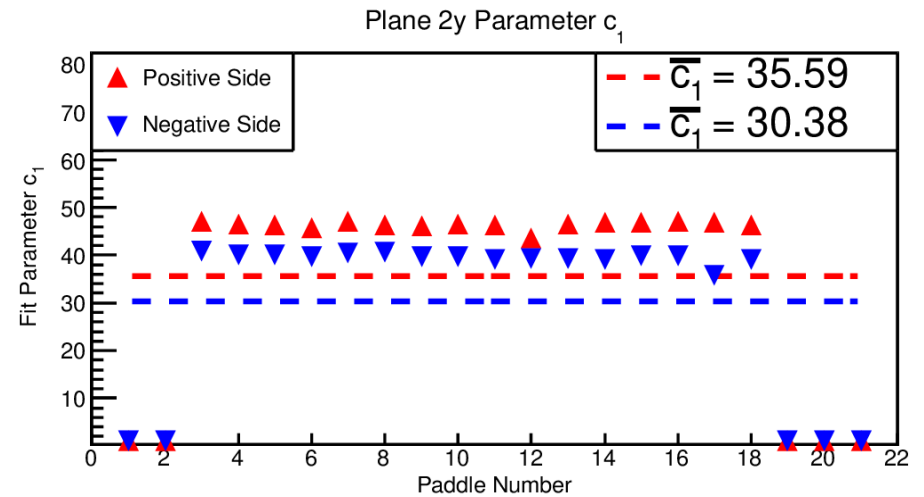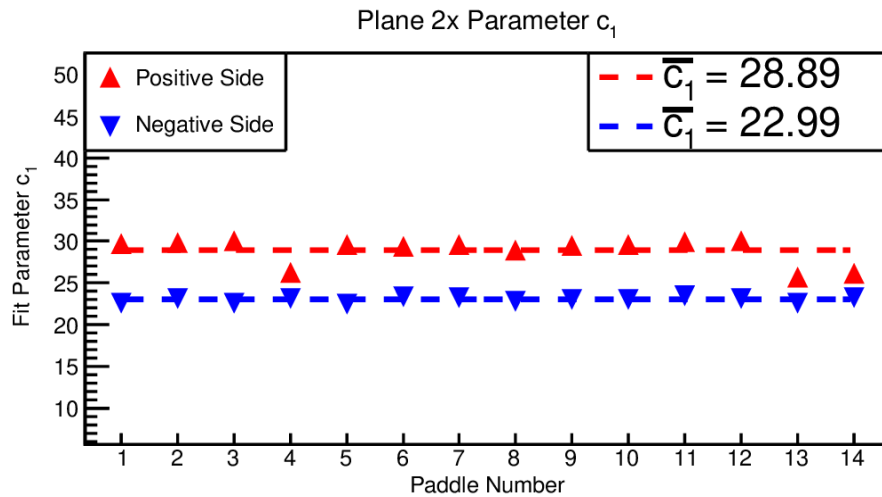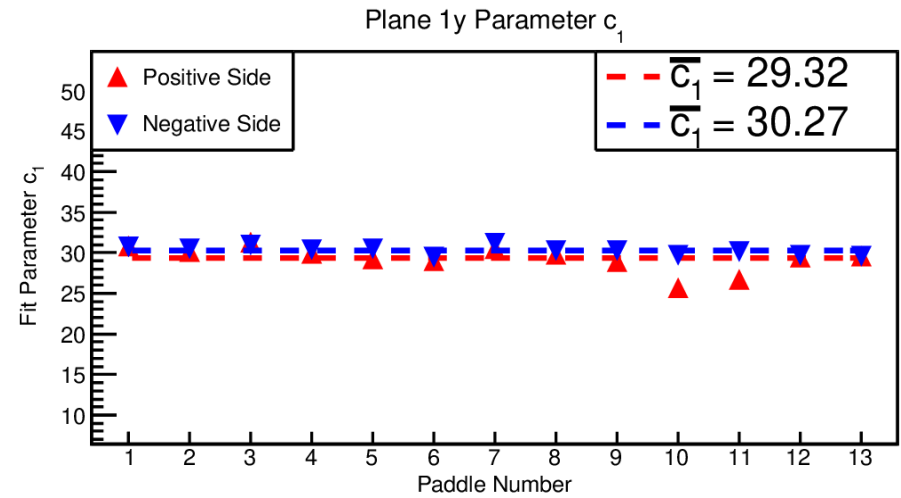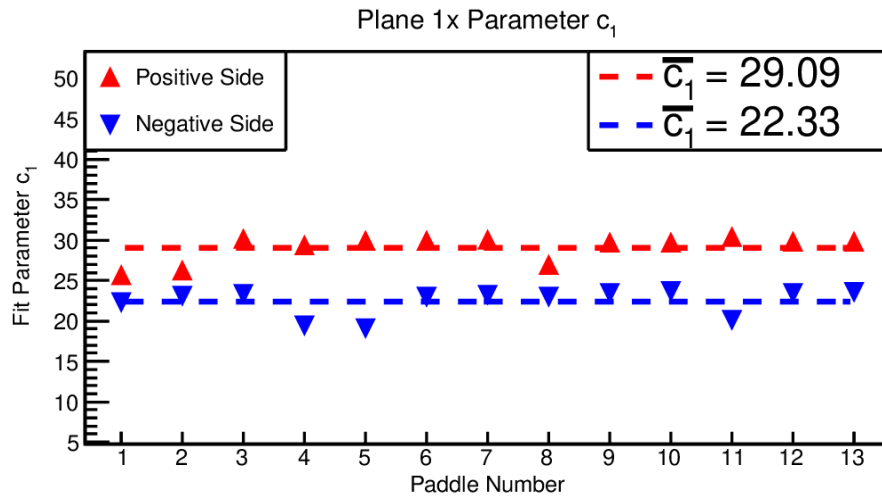- Time Walk correction
- TDC-ADC pulse time difference vs Pulse amplitude :2yPos

Hodoscope Calibration

Plane 1x Parameter c_1 — Positive Side, Negative Side; $\overline{c_1} = 29.09$, $\overline{c_1} = 22.33$

Plane 1y Parameter c_1 — Positive Side, Negative Side; $\overline{c_1} = 29.32$, $\overline{c_1} = 30.27$

Plane 2x Parameter c_1 — Positive Side, Negative Side; $\overline{c_1} = 28.89$, $\overline{c_1} = 22.99$

Plane 2y Parameter c_1 — Positive Side, Negative Side; $\overline{c_1} = 35.59$, $\overline{c_1} = 30.38$
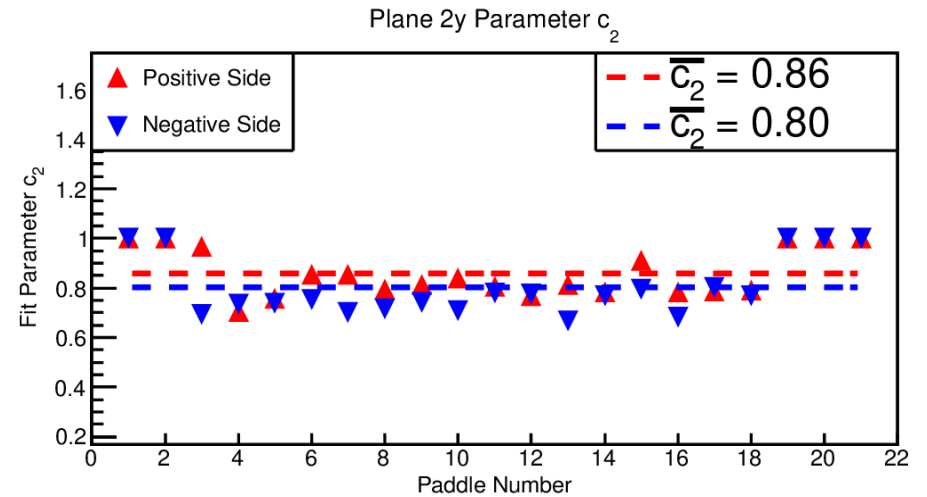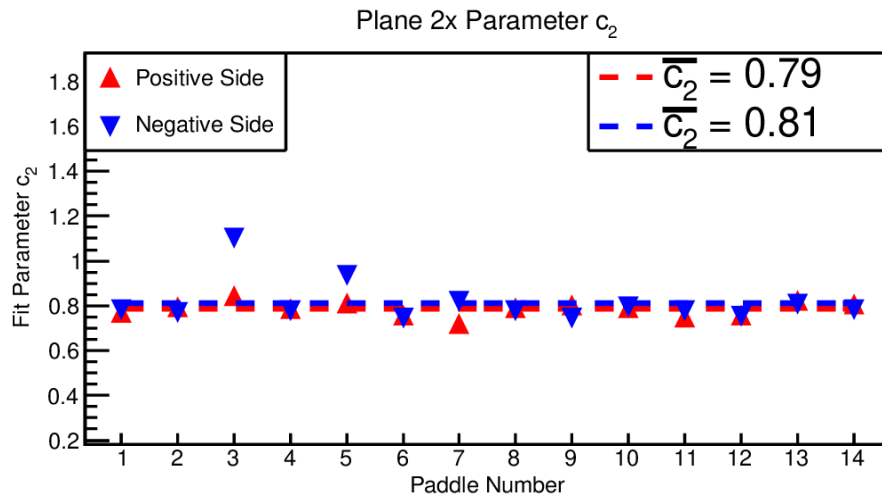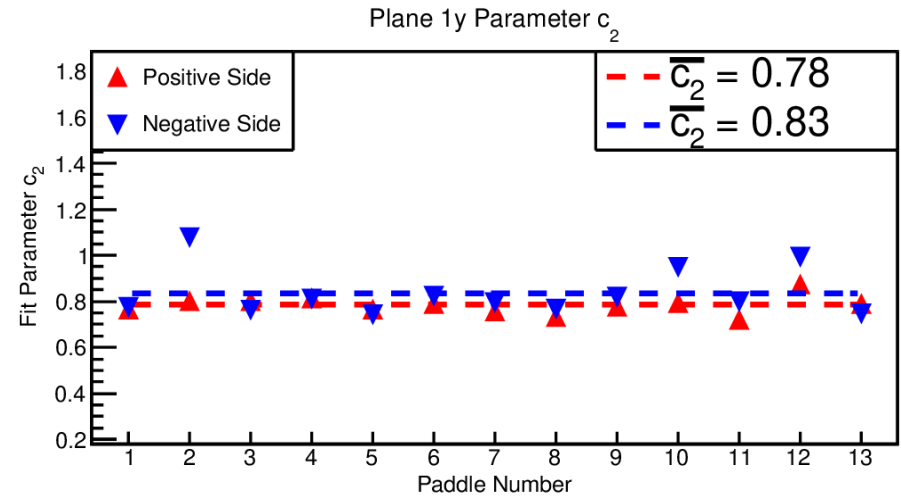
- Time Walk correction
- Fitting results for c_1

$$f_{TW}(a) = c_1 + \frac{1}{\left(a/TDC_{thrs}\right)c_2}$$

- a is ADC amplitude; TDC_{thrs}=120 mV

Hodoscope Calibration

- SHMS 10604: cosmic run
- E_p=3.4 GeV, 30°
- Trigger: 3/4 (pTRIG1)

Plane 1x Parameter c_2 — Positive Side, Negative Side, $\overline{c_2} = 0.88$, $\overline{c_2} = 0.94$

Plane 1y Parameter c_2 — Positive Side, Negative Side, $\overline{c_2} = 0.78$, $\overline{c_2} = 0.83$

Plane 2x Parameter c_2 — Positive Side, Negative Side, $\overline{c_2} = 0.79$, $\overline{c_2} = 0.81$

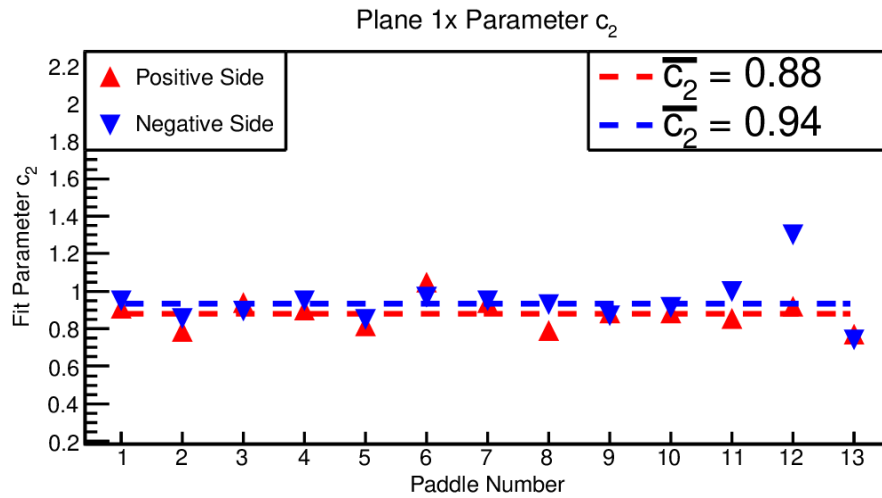Plane 2y Parameter c_2 — Positive Side, Negative Side, $\overline{c_2} = 0.86$, $\overline{c_2} = 0.80$

- Time Walk correction
- Fitting results for c_2

$$f_{TW}(a) = c_1 + \frac{1}{(a/TDC_{thrs})c_2}$$

- a is ADC amplitude; TDC_{thrs}=120 mV