Noise filter

ProtoDUNE cold electronics

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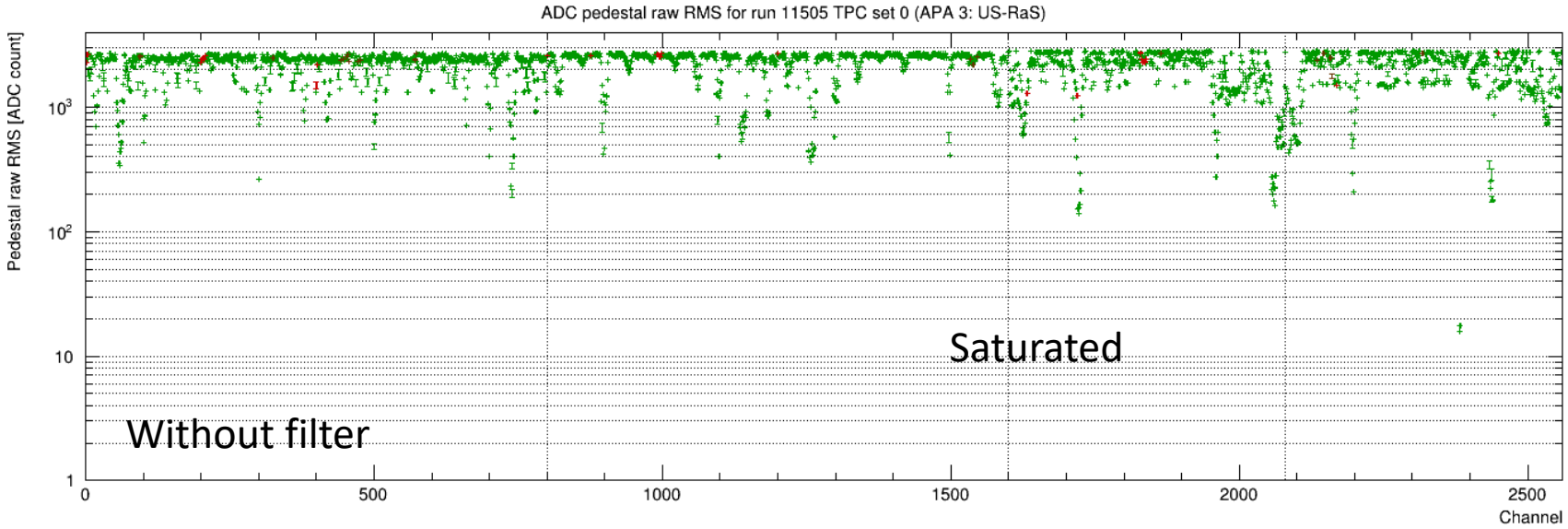
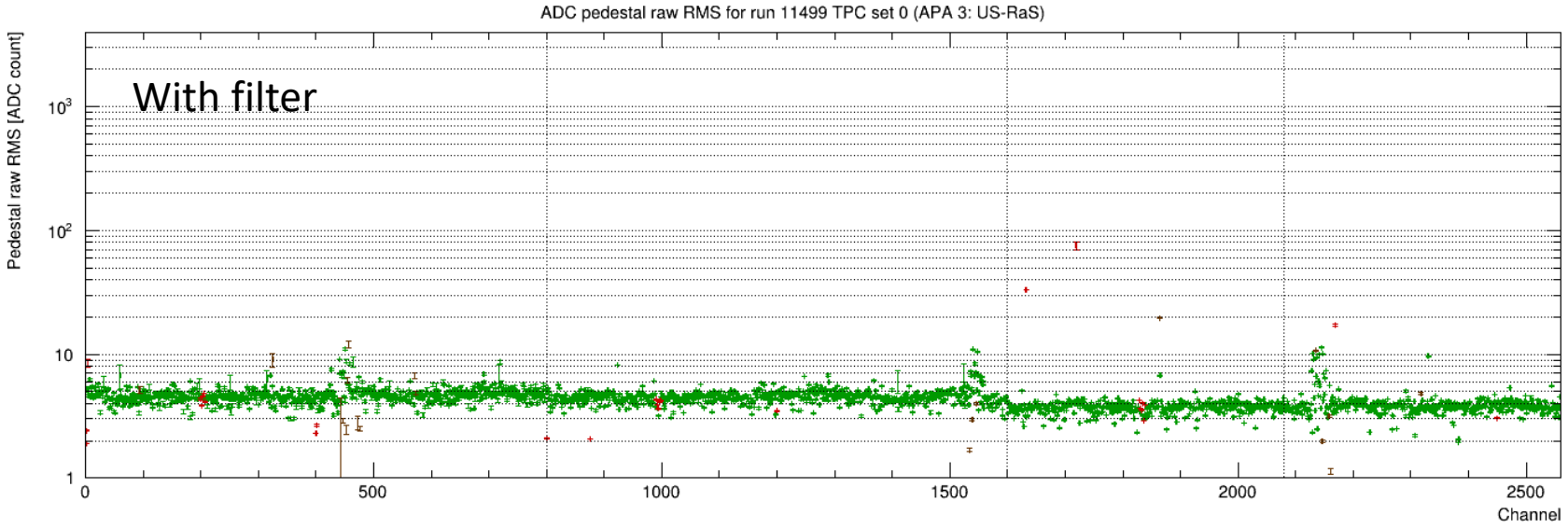
Updated 13:40 EDT

Introduction

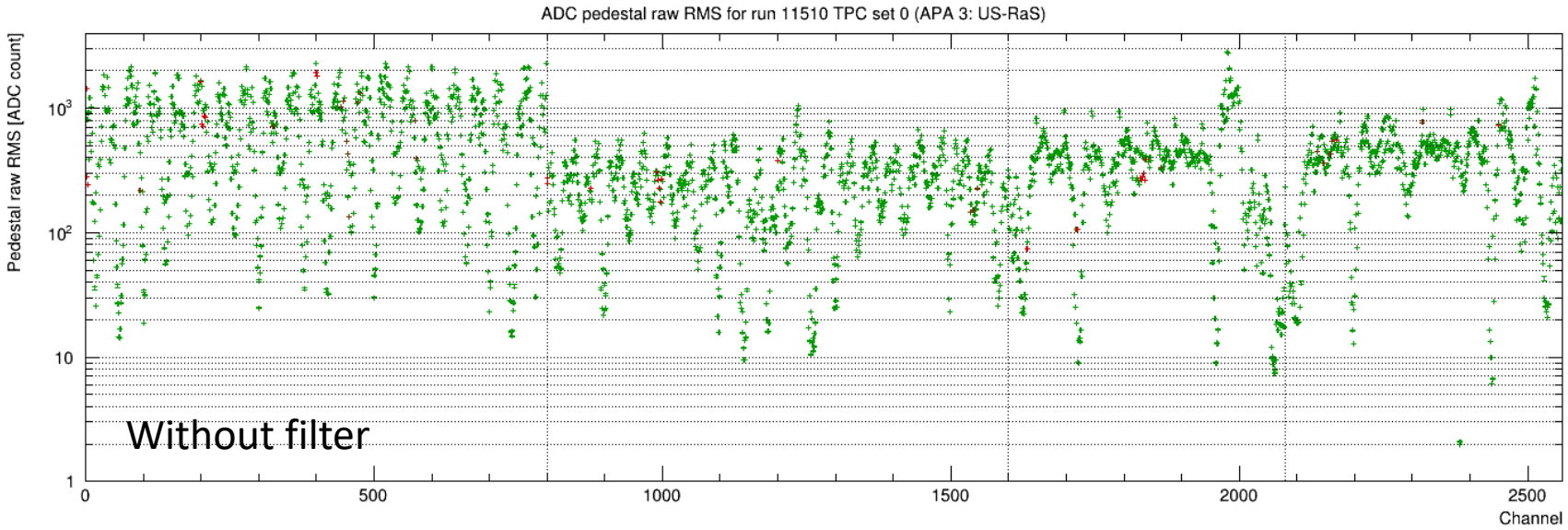
APA 3 raw RMS for recent runs with and without warm filter

30 kHz, 8 Vpp

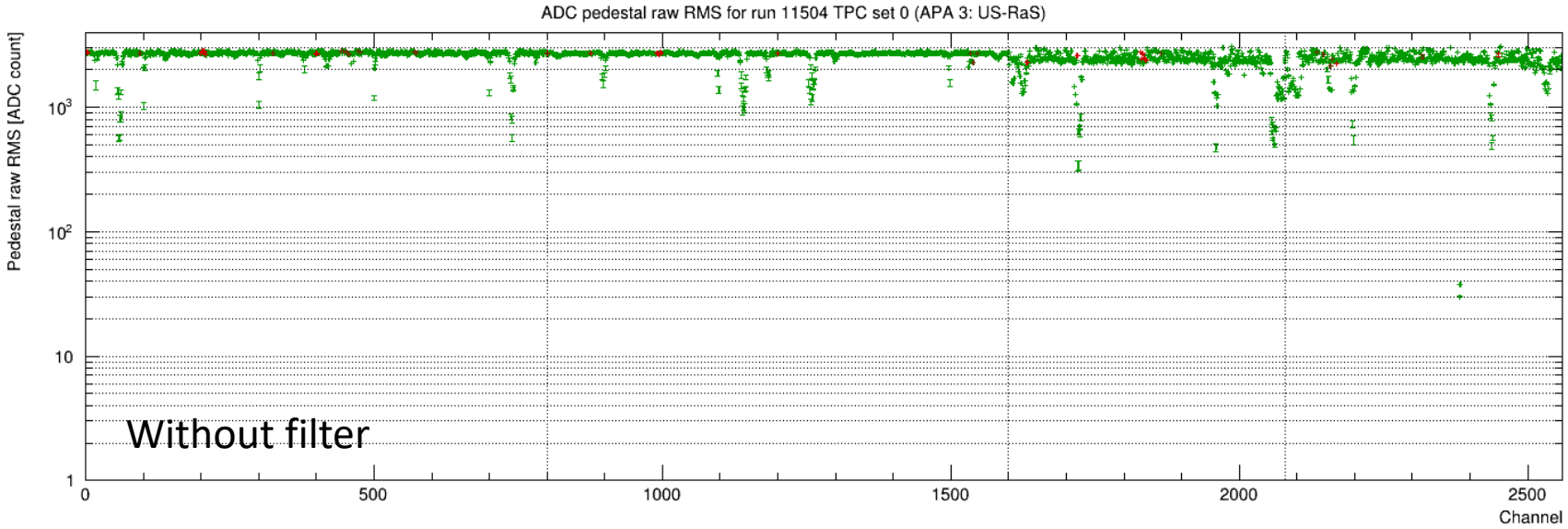

ADC pedestal raw RMS for run 11505 TPC set 0 (APA 3: US-RaS)
Pedestal raw RMS [ADC count]
Saturated
Without filter
Channel

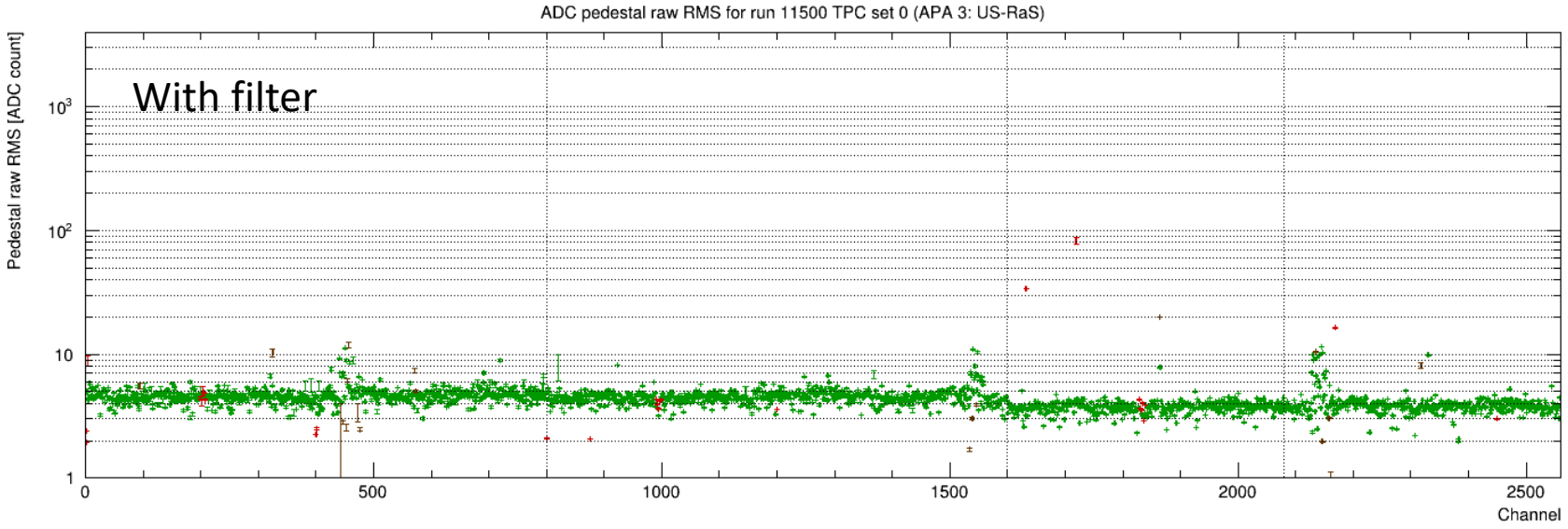

ADC pedestal raw RMS for run 11499 TPC set 0 (APA 3: US-RaS)
Pedestal raw RMS [ADC count]
With filter
Channel

30 kHz, 0.5 Vpp

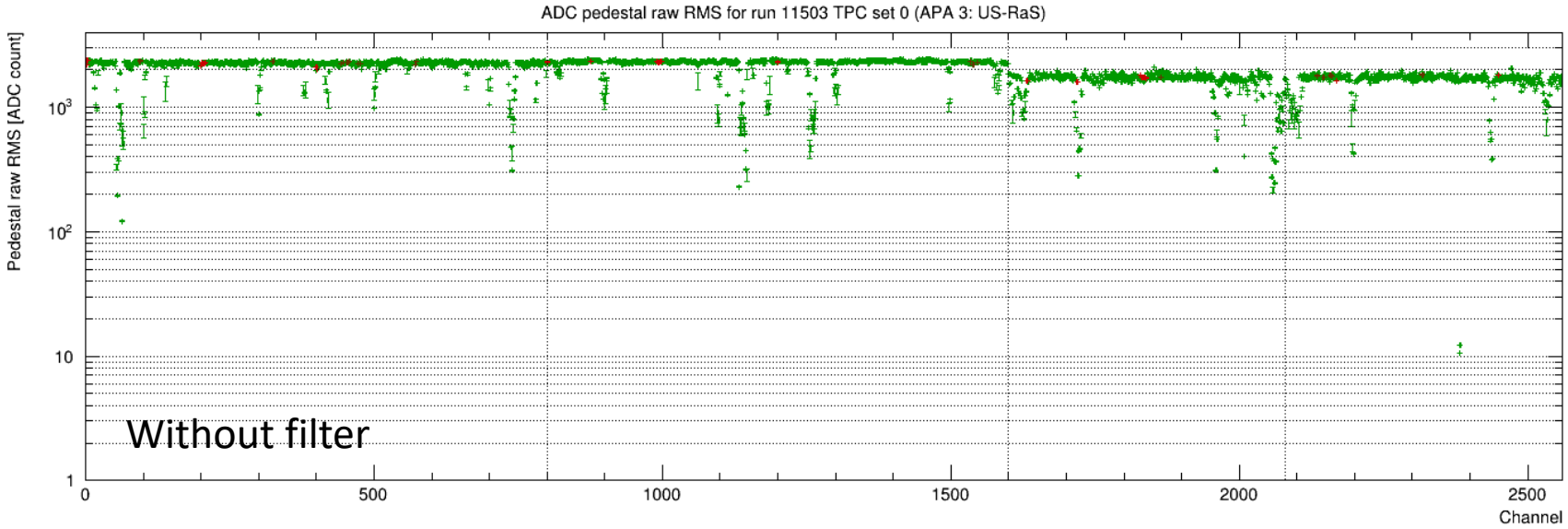

ADC pedestal raw RMS for run 11510 TPC set 0 (APA 3: US-RaS)
Pedestal raw RMS [ADC count]
10^3
10^2
10
1
0
500
1000
1500
2000
2500
Channel
Without filter

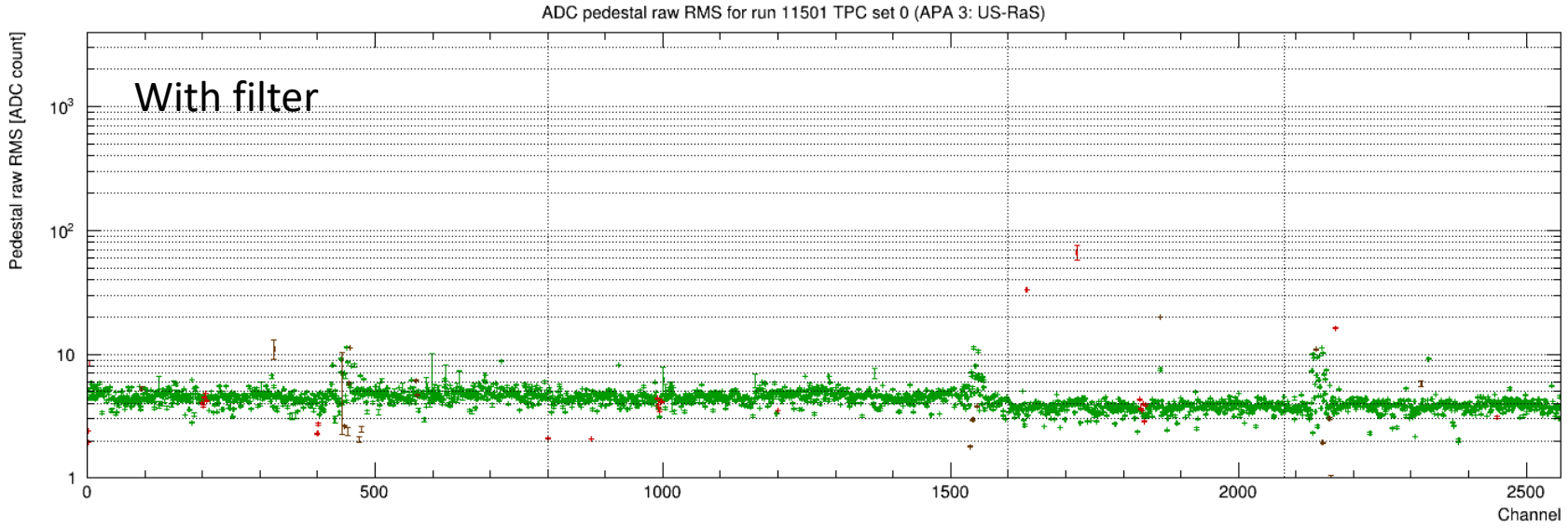
100 KHz, 8 Vpp


ADC pedestal raw RMS for run 11504 TPC set 0 (APA 3: US-RaS)
Pedestal raw RMS [ADC count]
Without filter
Channel

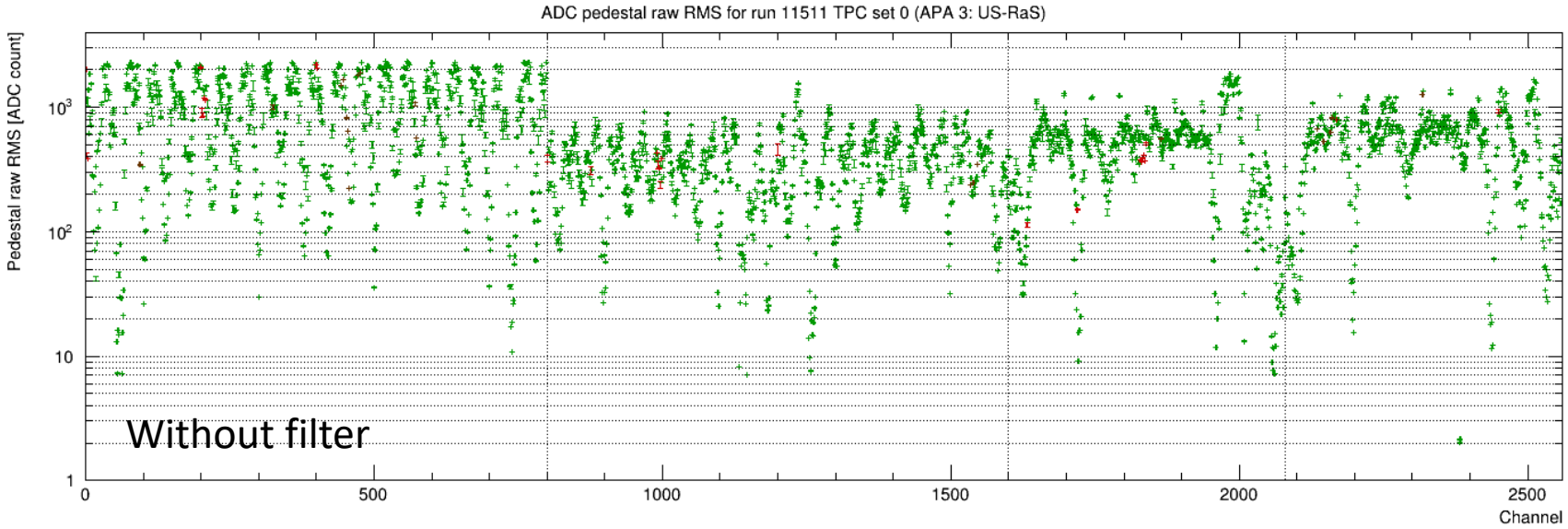

ADC pedestal raw RMS for run 11500 TPC set 0 (APA 3: US-RaS)
Pedestal raw RMS [ADC count]
With filter
Channel

300 kHz, 8 Vpp

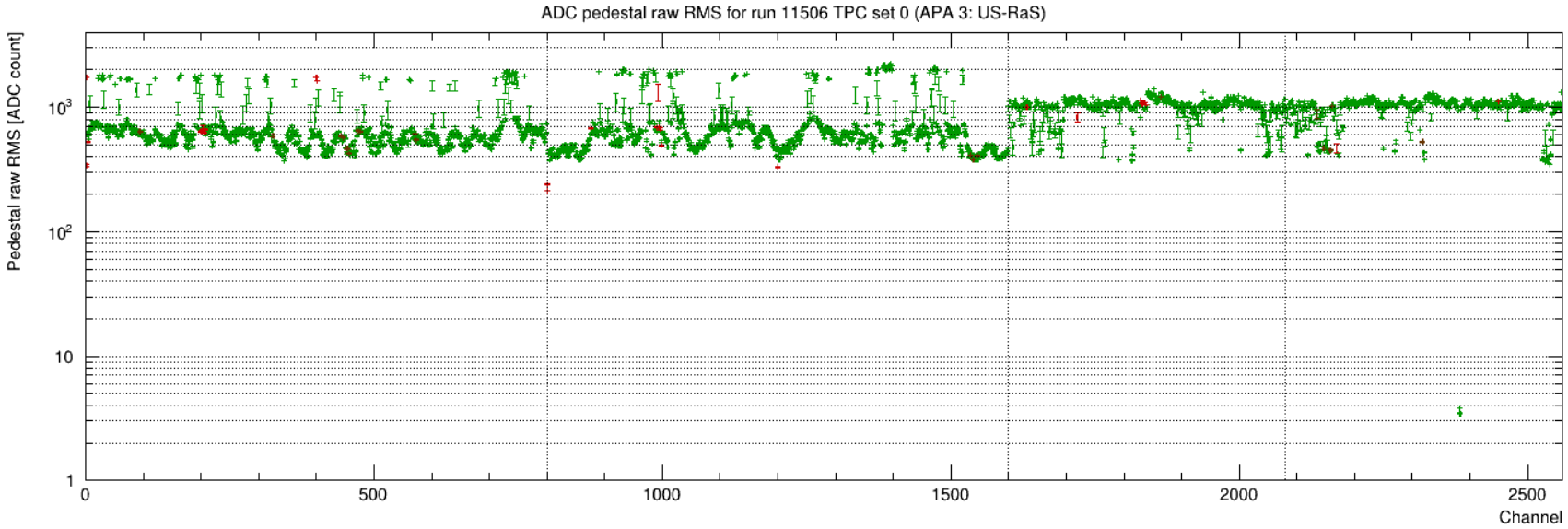

ADC pedestal raw RMS for run 11503 TPC set 0 (APA 3: US-RaS)
Pedestal raw RMS [ADC count]
Without filter
Channel

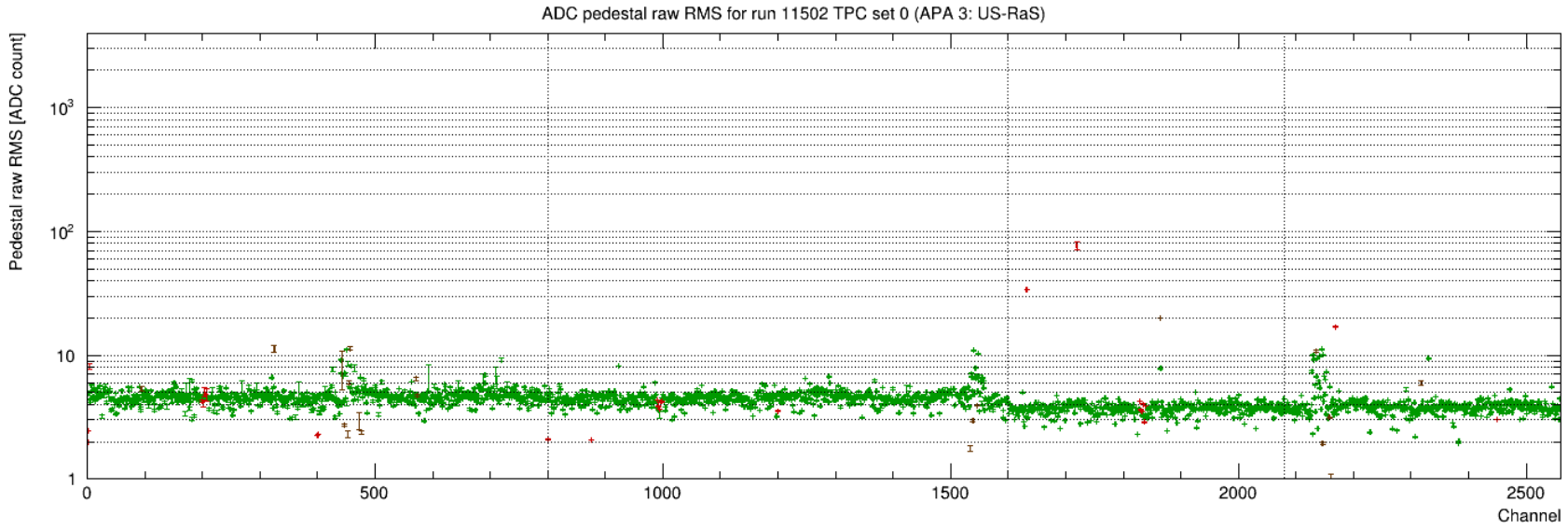

ADC pedestal raw RMS for run 11501 TPC set 0 (APA 3: US-RaS)
Pedestal raw RMS [ADC count]
With filter
Channel

300 kHz, 0.5 Vpp



Random 8 Vpp


ADC pedestal raw RMS for run 11506 TPC set 0 (APA 3: US-RaS)
Pedestal raw RMS [ADC count]
10^3
10^2
10
1
0
500
1000
1500
2000
2500
Channel

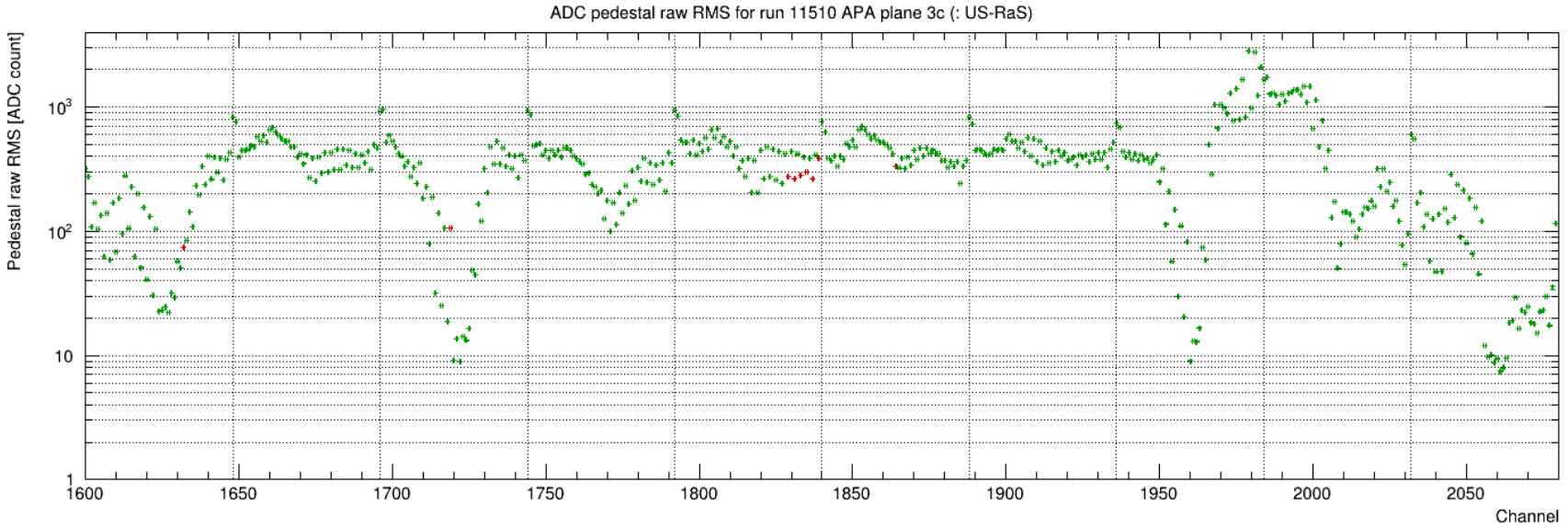

ADC pedestal raw RMS for run 11502 TPC set 0 (APA 3: US-RaS)
Pedestal raw RMS [ADC count]
10^3
10^2
10
1
0
500
1000
1500
2000
2500
Channel

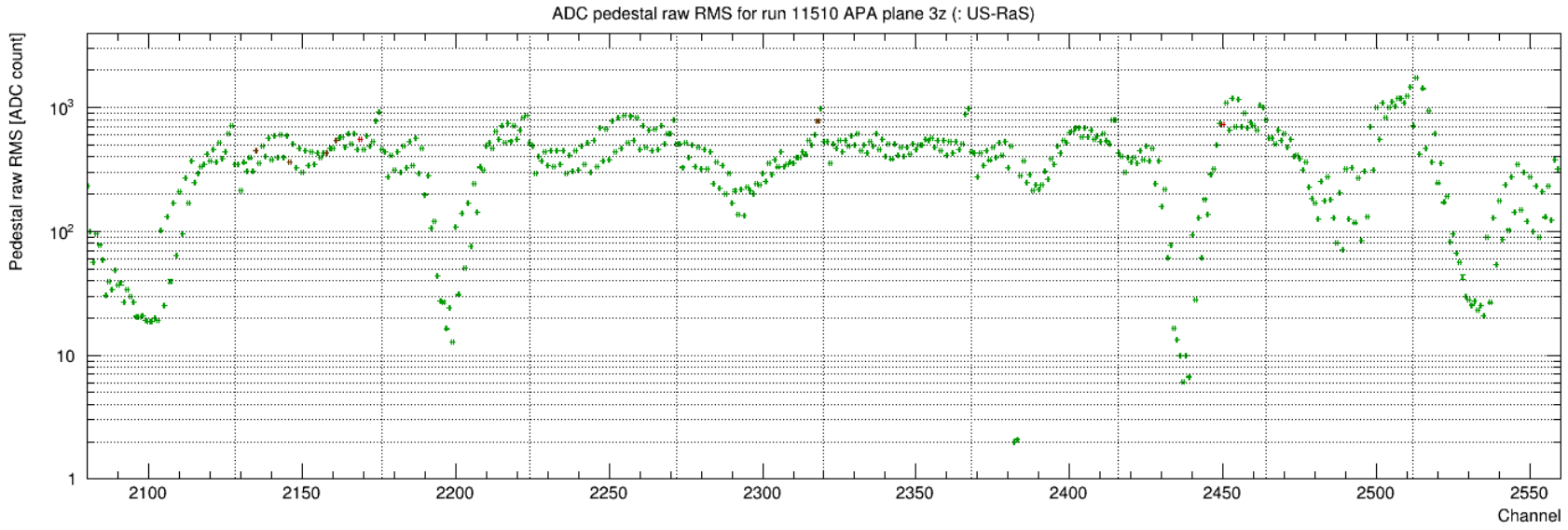
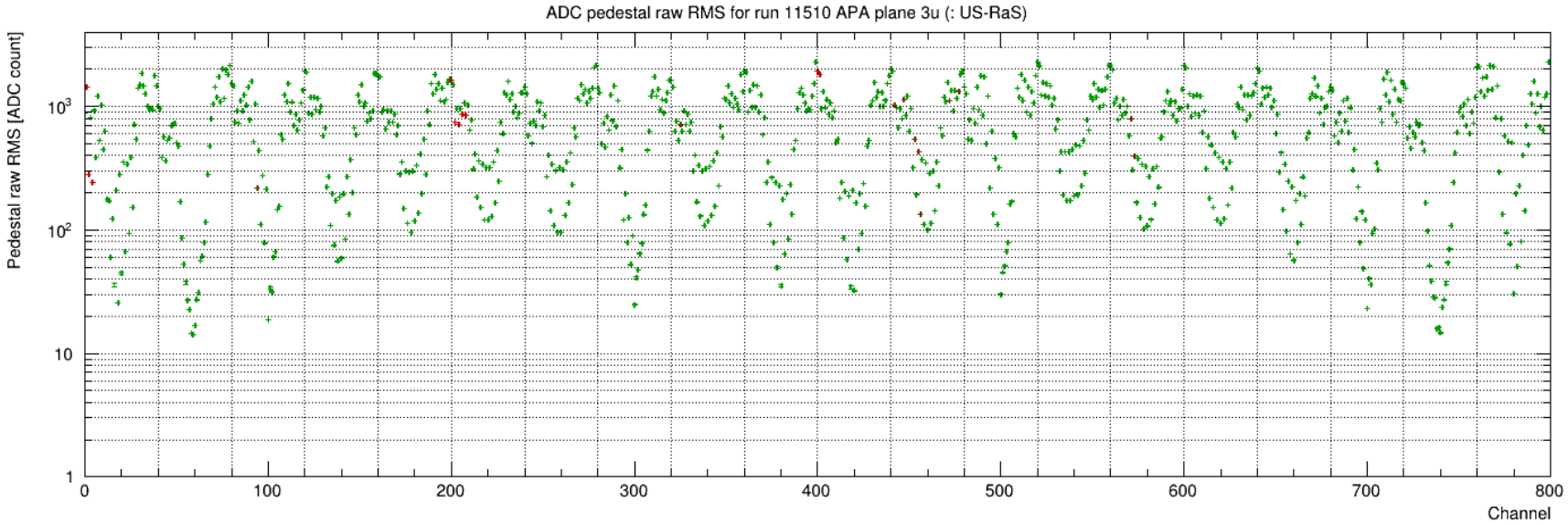
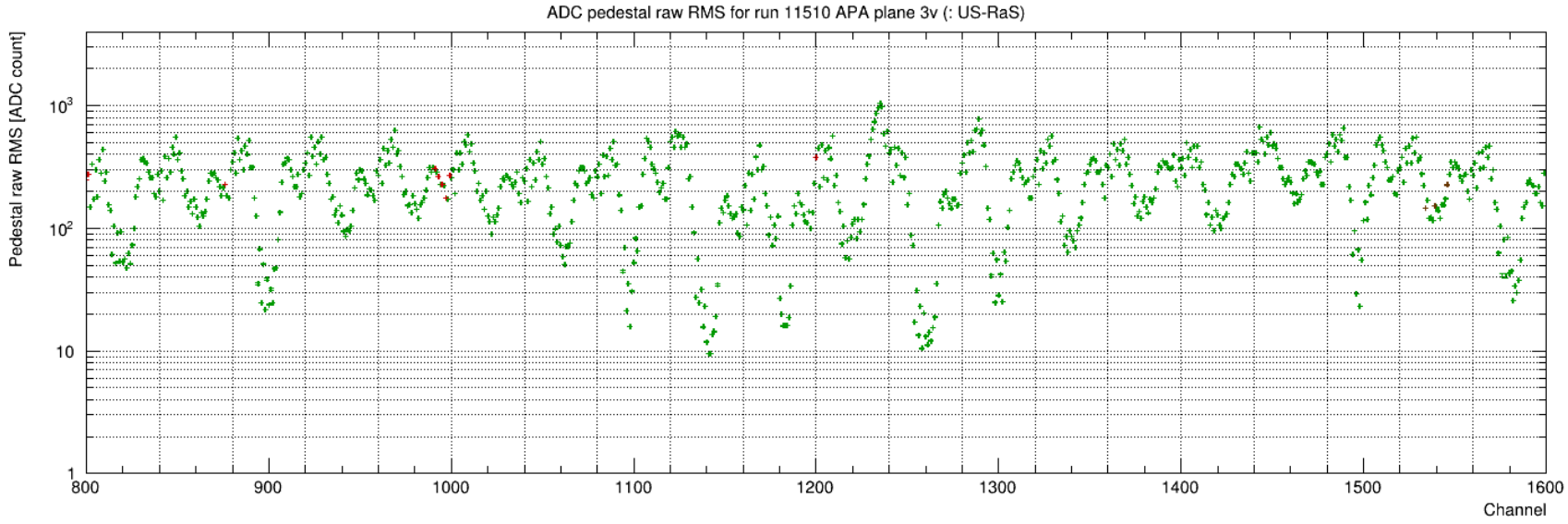
By APA plane

Following show noise by APA plane

- FEMB boundaries are shown

30 kHz w/o filter, collection planes





30 kHz w/o filter, induction planes