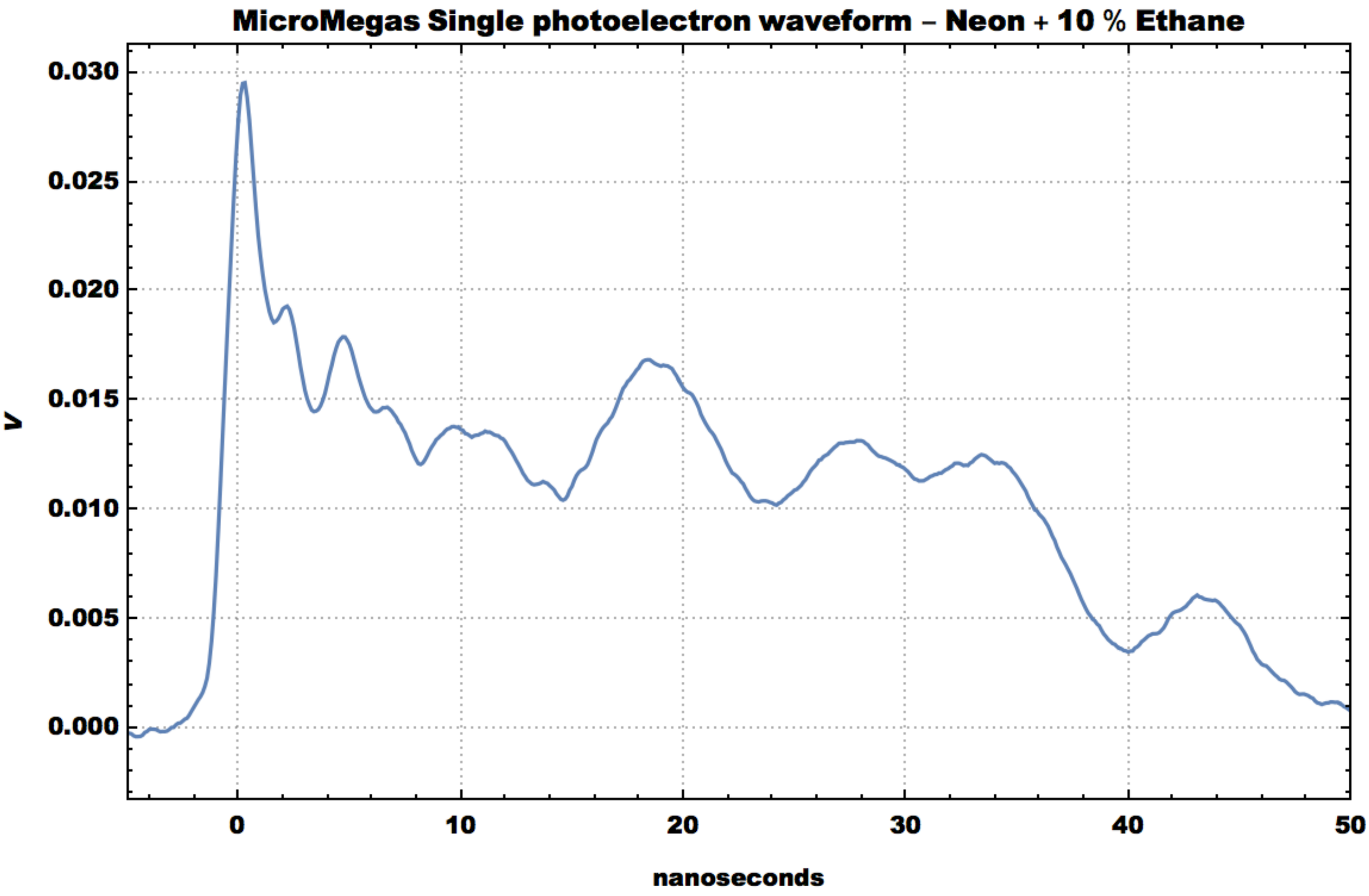
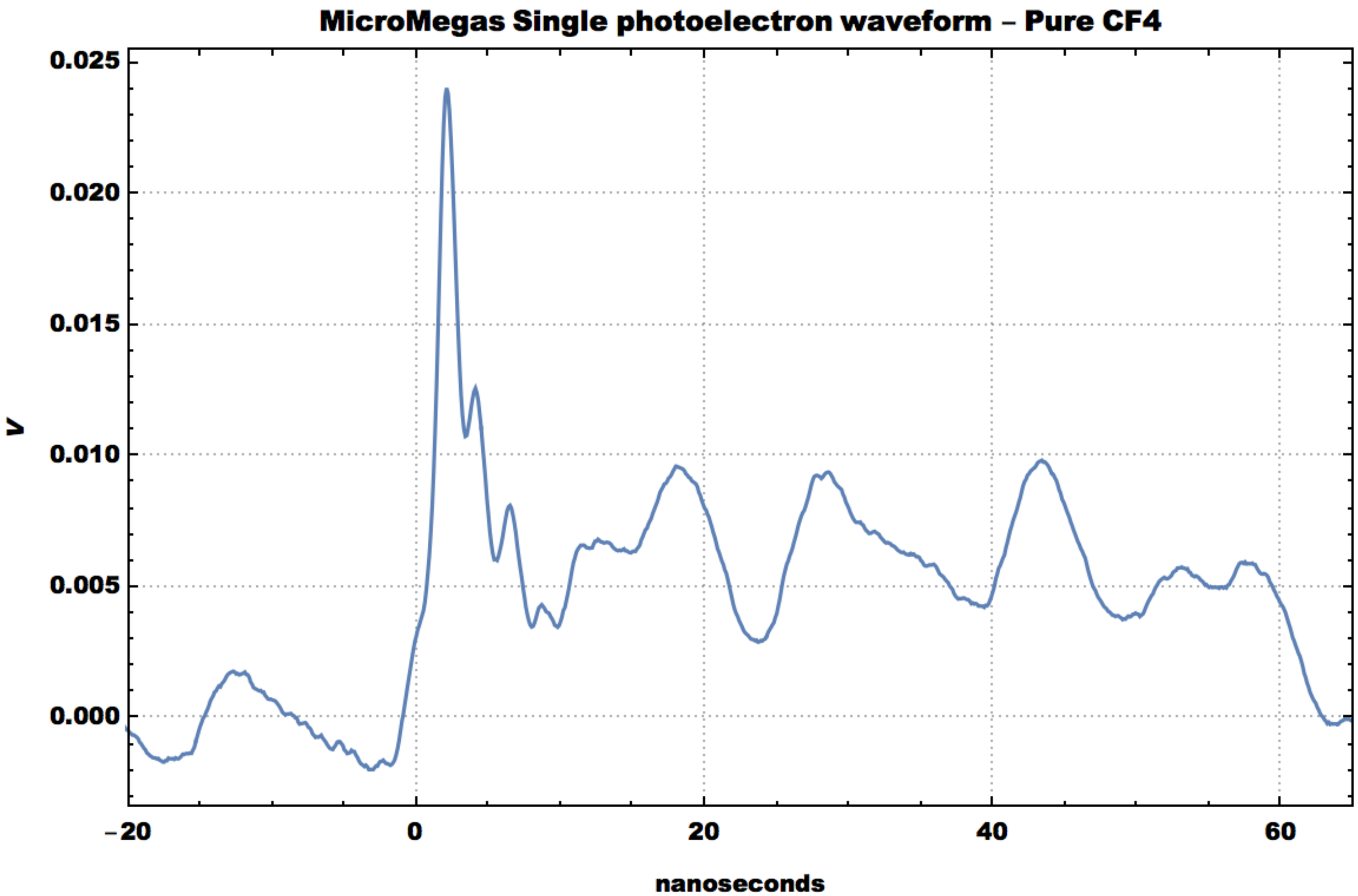
# Single photoelectron waveform

Diego, Thomas and I felt we need a good waveform for single photoelectrons to include in the paper. In what follows there is a clean one averaged from ~500 triggers for the Ne-Ethane 10% candle data
Since Thomas sent also lab data for various cf4+He and He+ Ethane mixtures I thought it would be worth looking at how they differ. These are a good test bench also for Diego and Filippo's waveform simulations.
Note: for the later ones it seemed like little was gained by averaging triggers so they are just one sweep.
SNW-11/24/15

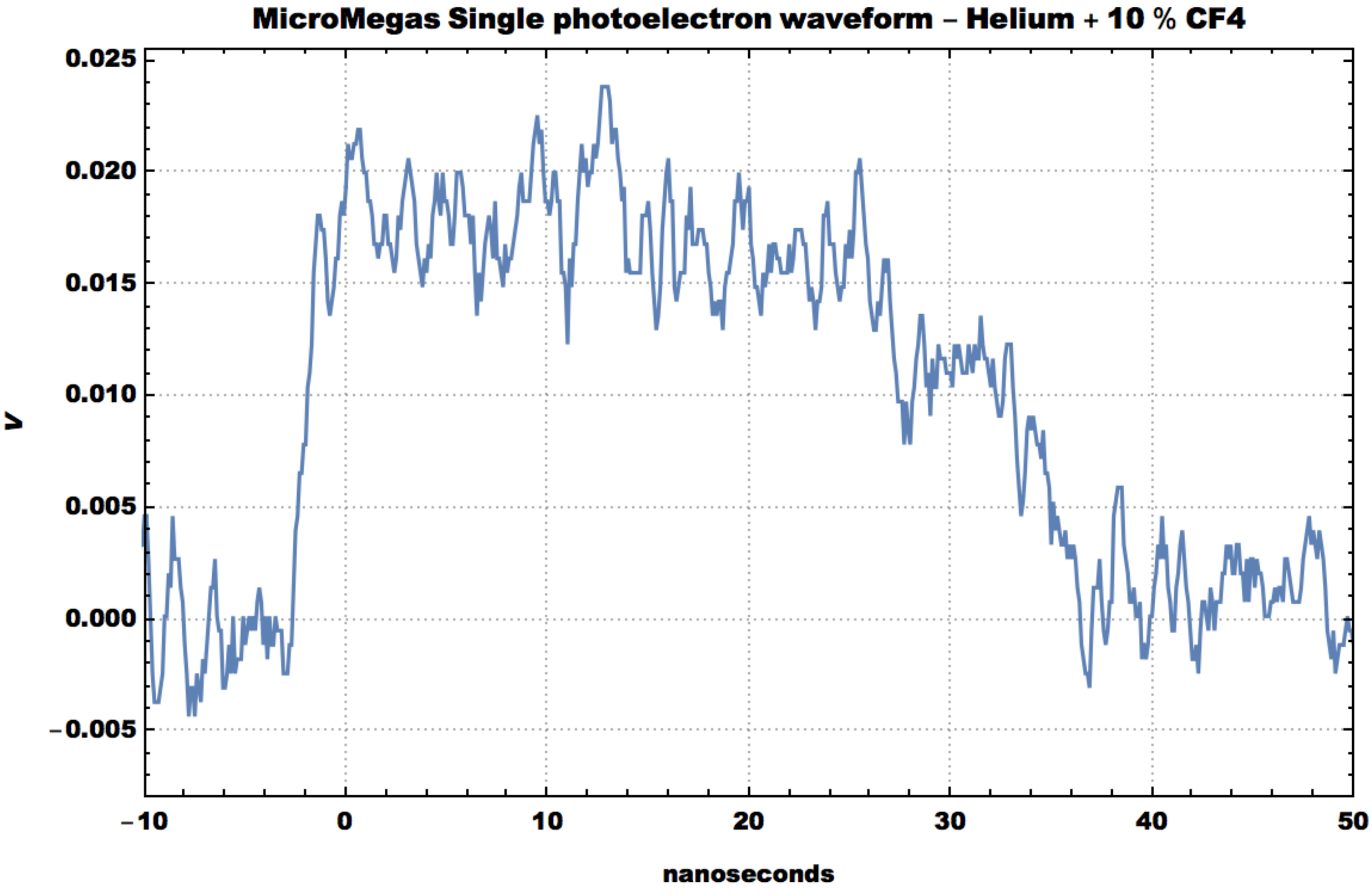
# Ne-Ethane (for paper)



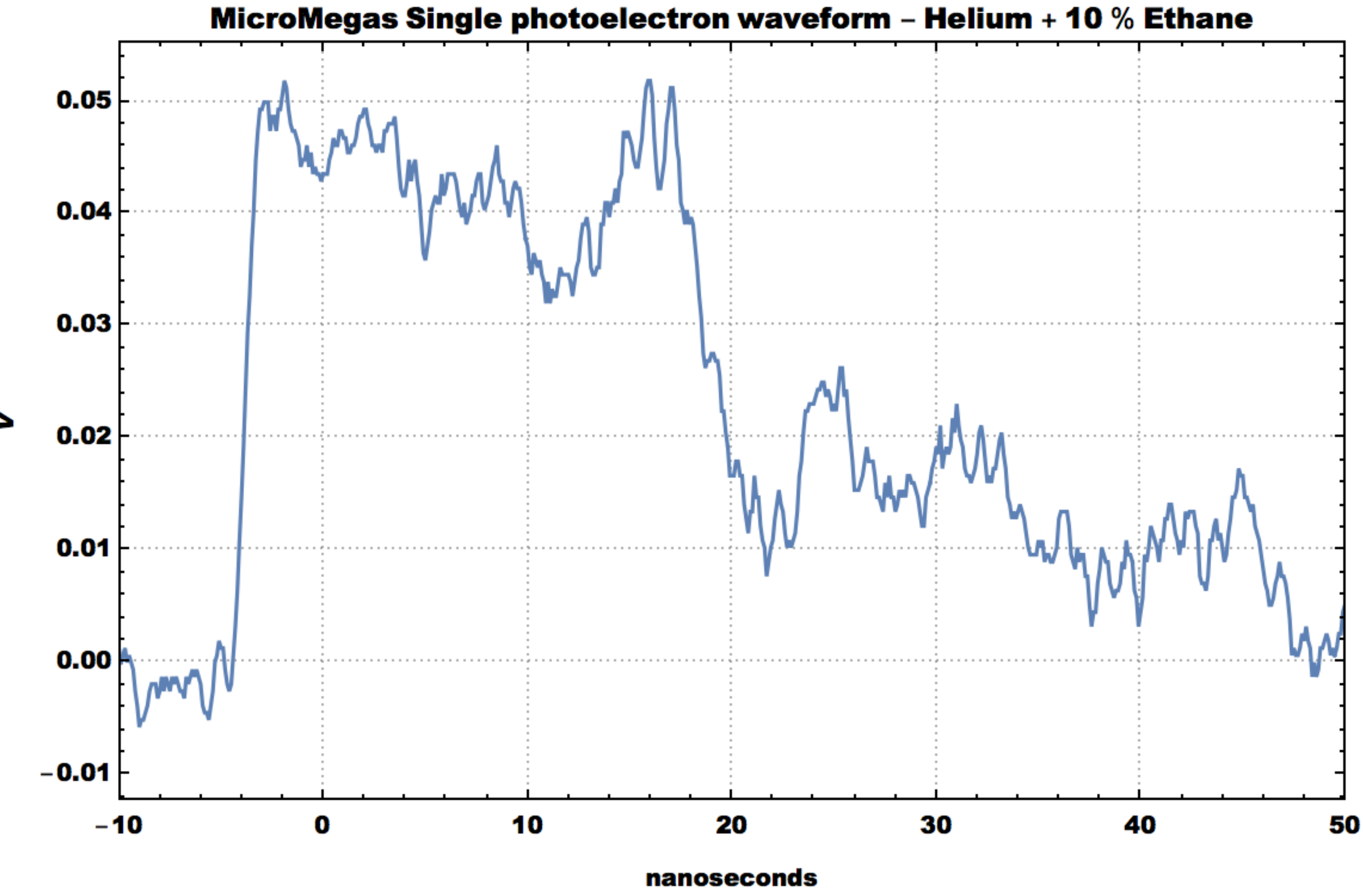
# pure CF4


MicroMegas Single photoelectron waveform – Pure CF4
0.025
0.020
0.015
0.010
0.005
0.000
V
−20
0
20
40
60
nanoseconds

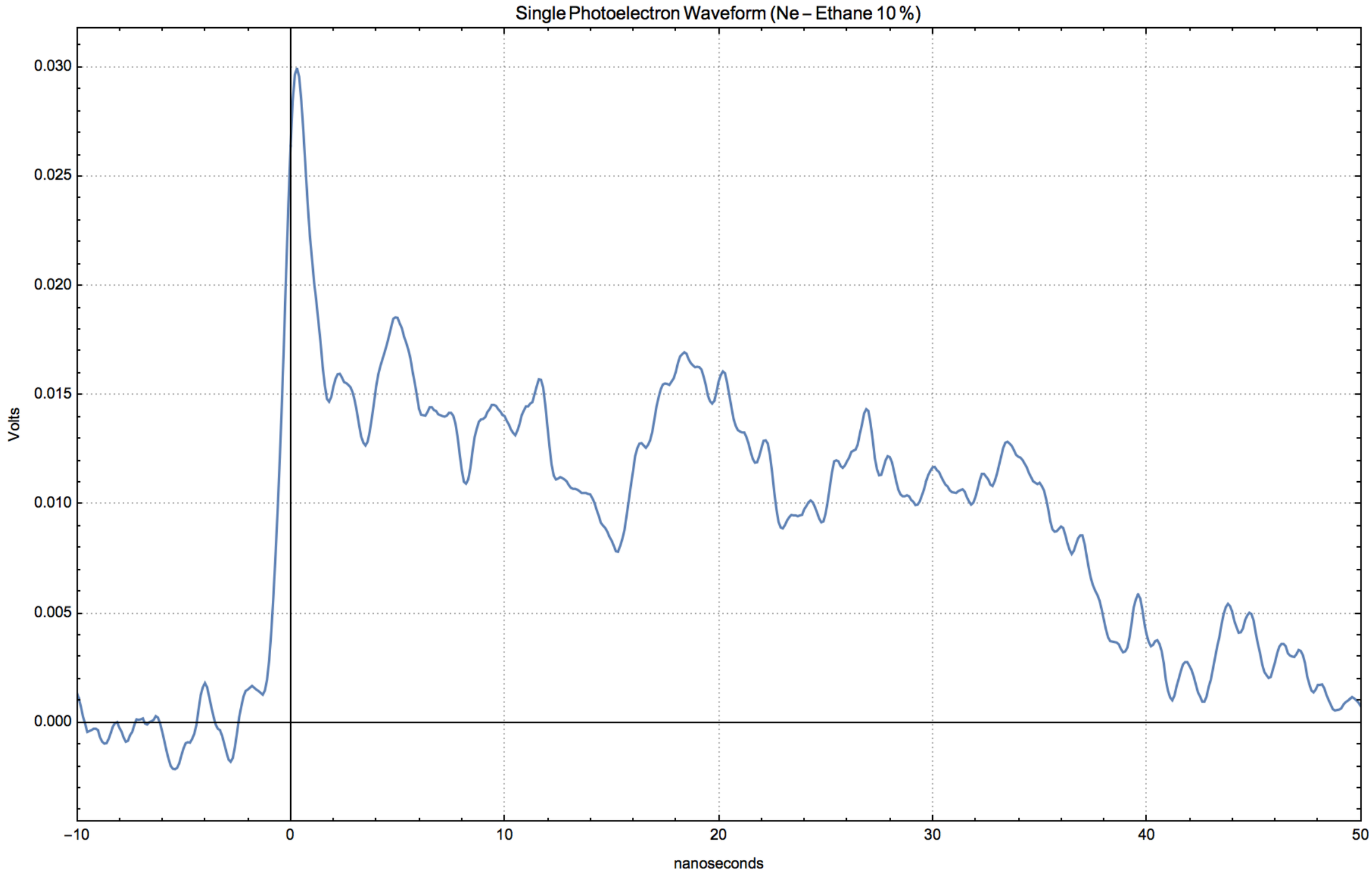
# He+CF4


MicroMegas Single photoelectron waveform – Helium + 10 % CF4
0.025
0.020
0.015
0.010
0.005
0.000
−0.005
V
−10
0
10
20
30
40
50
nanoseconds

# He+Ethane


MicroMegas Single photoelectron waveform – Helium + 10 % Ethane
0.05
0.04
0.03
0.02
0.01
0.00
−0.01
V
−10
0
10
20
30
40
50
nanoseconds

# Re-worked some Plots


Single Photoelectron Waveform (Ne – Ethane 10 %)
0.030
0.025
0.020
0.015
0.010
0.005
0.000
Volts
−10
0
10
20
30
40
50
nanoseconds

Single Photoelectron Waveform (Pure CF4)