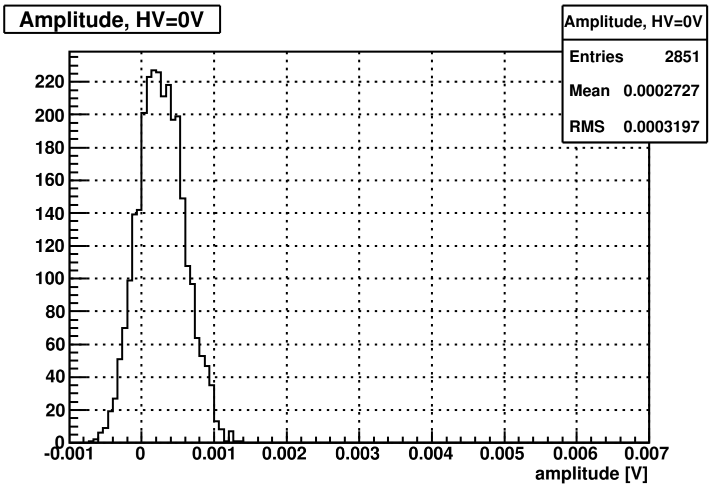
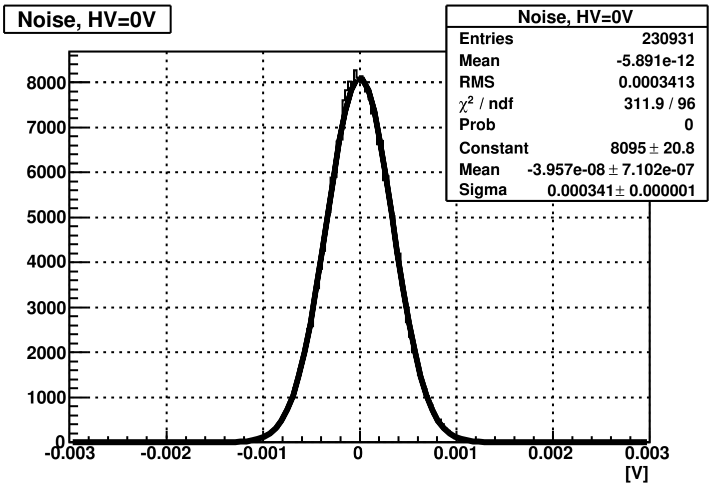
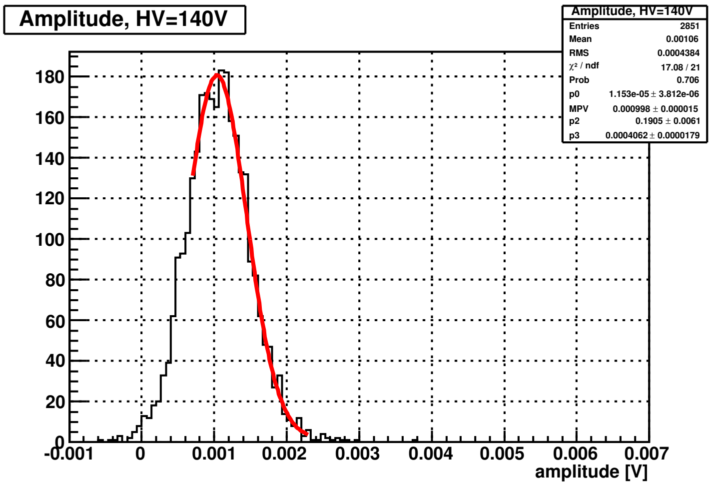
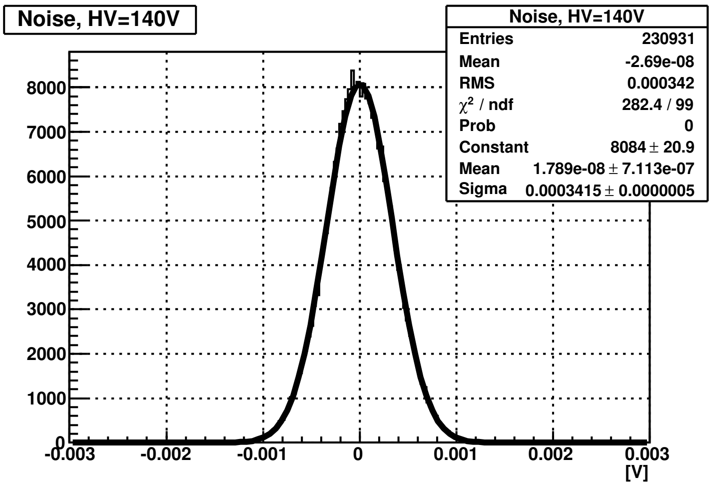
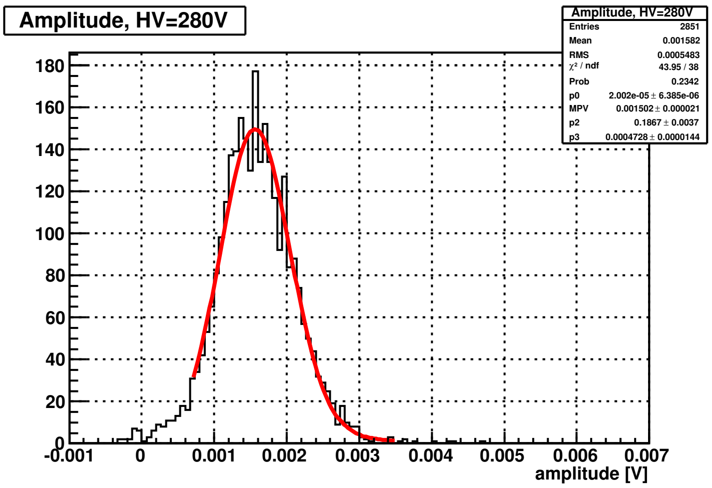
# Fotec Box 403 (ASC-D-0230-7 and ASC-D-0230-5), Measurement 1 (BWL 200MHz)

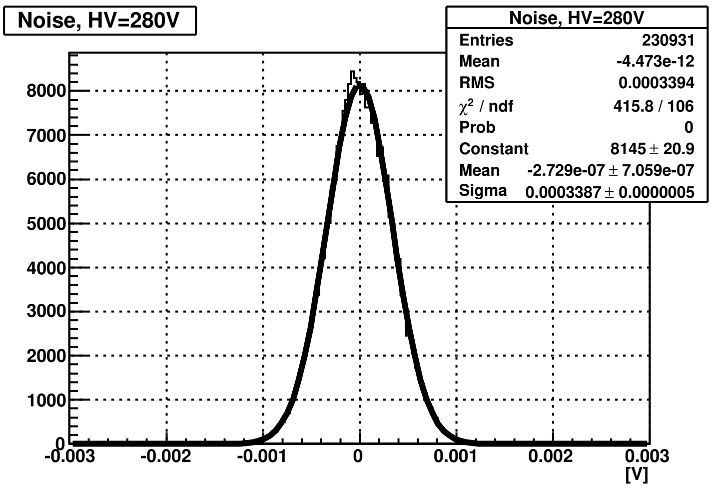


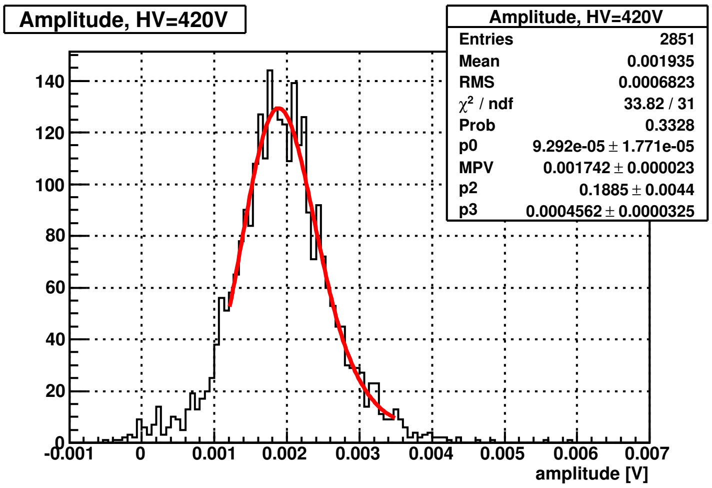



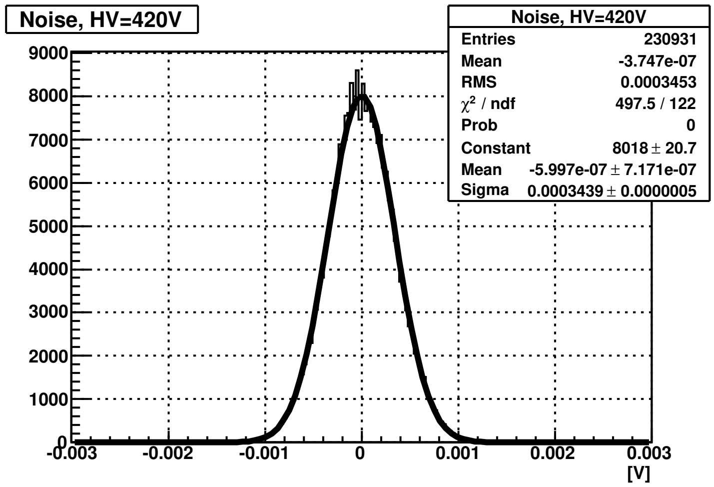



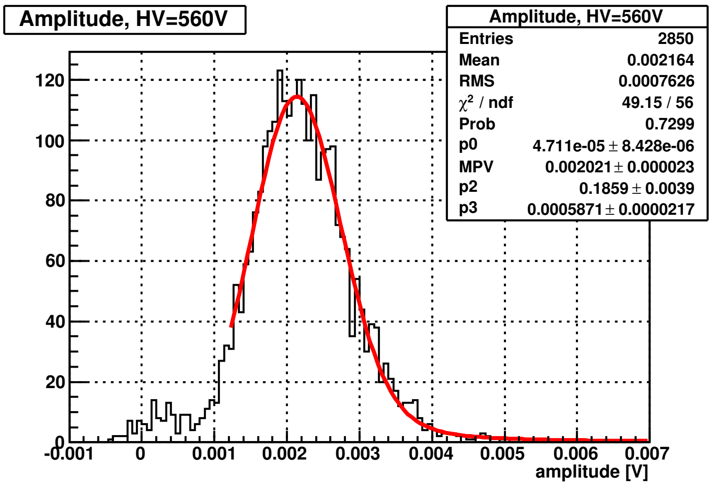



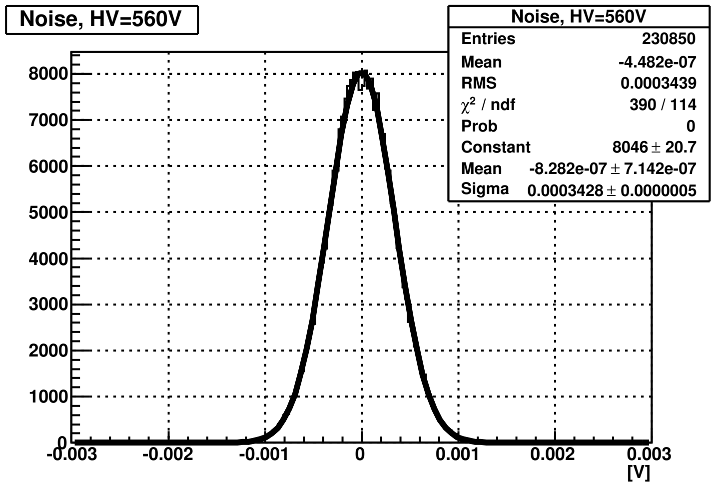



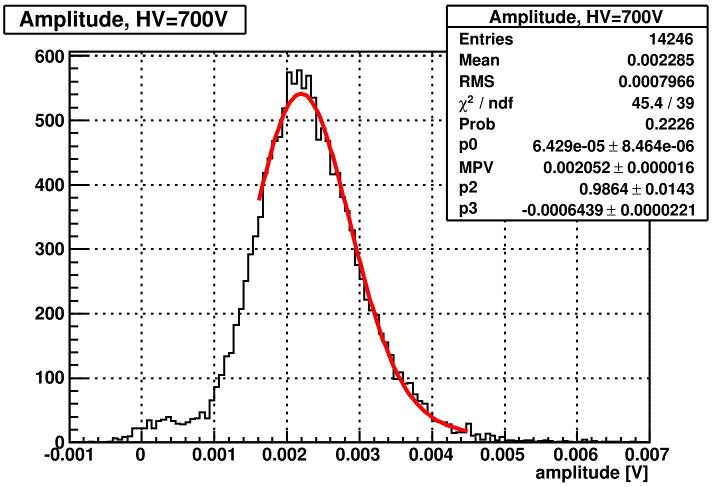



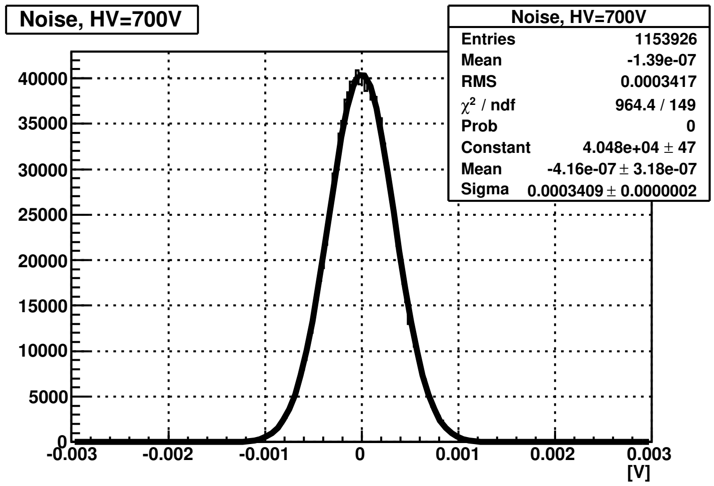

Amplitude, HV=420V
Amplitude, HV=420V
Entries 2851
Mean 0.001935
RMS 0.0006823
χ² / ndf 33.82 / 31
Prob 0.3328
p0 9.292e-05 ± 1.771e-05
MPV 0.001742 ± 0.000023
p2 0.1885 ± 0.0044
p3 0.0004562 ± 0.0000325
amplitude [V]

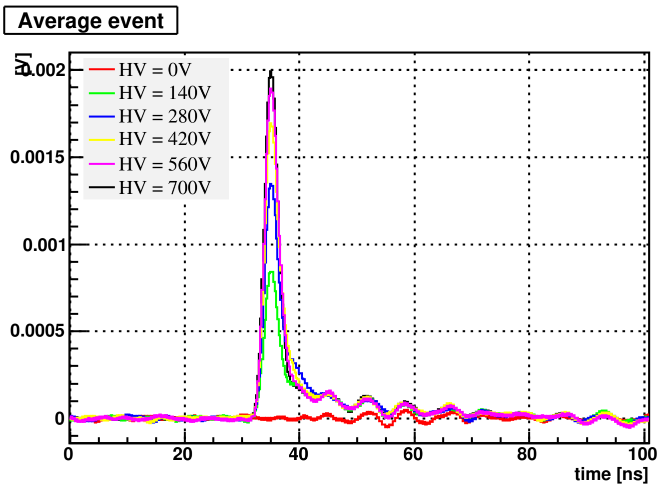

Noise, HV=420V
Noise, HV=420V
Entries 230931
Mean -3.747e-07
RMS 0.0003453
χ² / ndf 497.5 / 122
Prob 0
Constant 8018 ± 20.7
Mean -5.997e-07 ± 7.171e-07
Sigma 0.0003439 ± 0.0000005
[V]

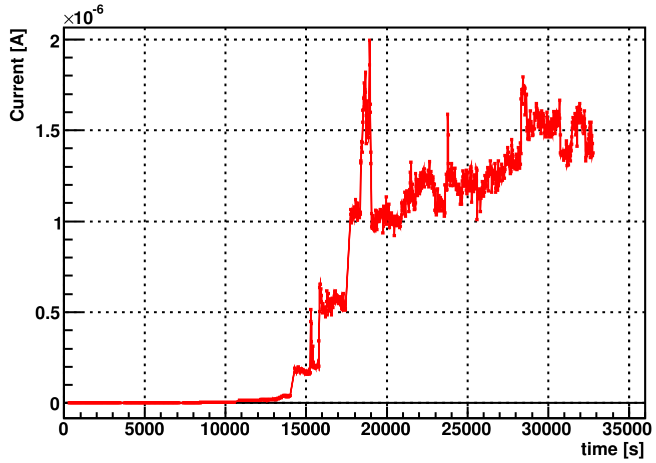

Amplitude, HV=560V
Amplitude, HV=560V
Entries 2850
Mean 0.002164
RMS 0.0007626
χ² / ndf 49.15 / 56
Prob 0.7299
p0 4.711e-05 ± 8.428e-06
MPV 0.002021 ± 0.000023
p2 0.1859 ± 0.0039
p3 0.0005871 ± 0.0000217
amplitude [V]

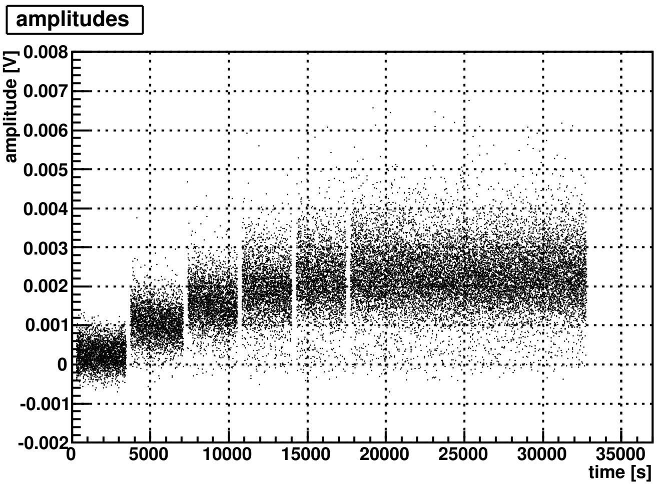

Noise, HV=560V
Noise, HV=560V
Entries 230850
Mean -4.482e-07
RMS 0.0003439
χ² / ndf 390 / 114
Prob 0
Constant 8046 ± 20.7
Mean -8.282e-07 ± 7.142e-07
Sigma 0.0003428 ± 0.0000005
[V]

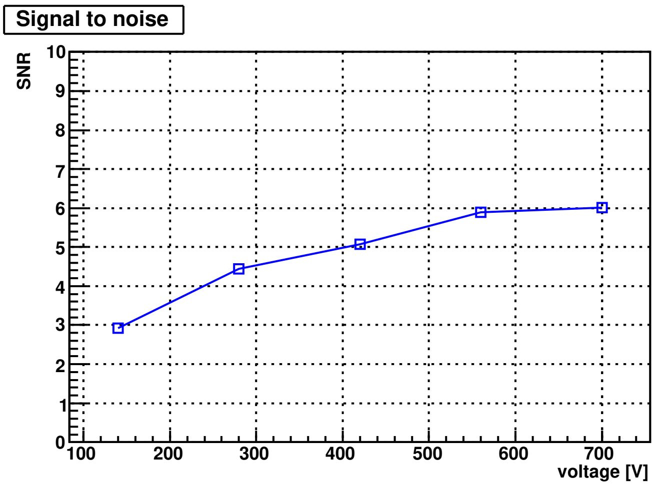

Amplitude, HV=700V
Amplitude, HV=700V
Entries 14246
Mean 0.002285
RMS 0.0007966
χ² / ndf 45.4 / 39
Prob 0.2226
p0 6.429e-05 ± 8.464e-06
MPV 0.002052 ± 0.000016
p2 0.9864 ± 0.0143
p3 -0.0006439 ± 0.0000221
amplitude [V]

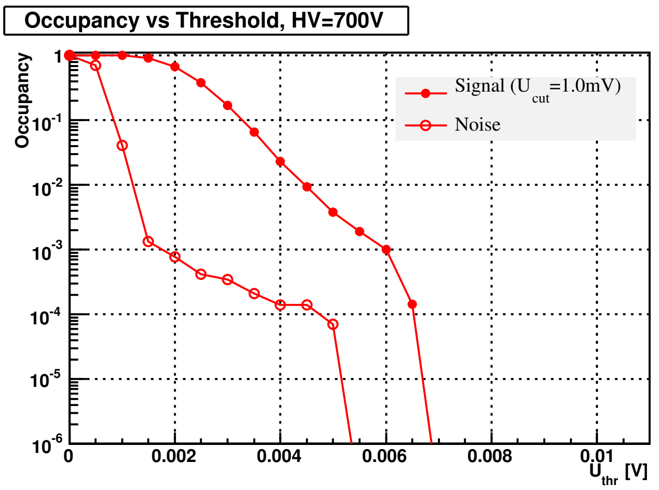

Noise, HV=700V
Noise, HV=700V
Entries 1153926
Mean -1.39e-07
RMS 0.0003417
χ² / ndf 964.4 / 149
Prob 0
Constant 4.048e+04 ± 47
Mean -4.16e-07 ± 3.18e-07
Sigma 0.0003409 ± 0.0000002
[V]

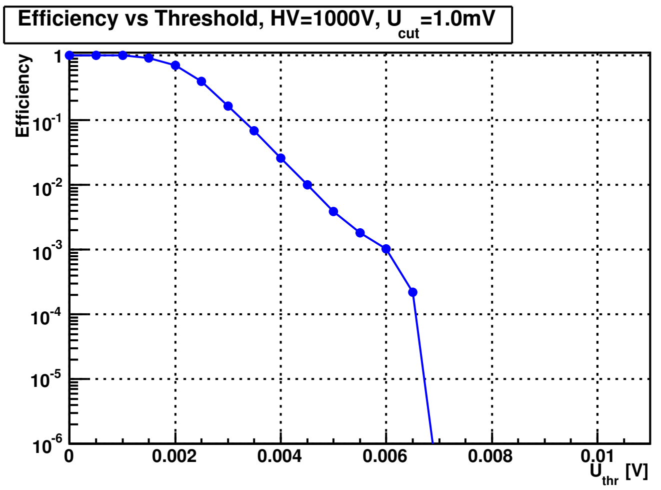

Average event
HV = 0V
HV = 140V
HV = 280V
HV = 420V
HV = 560V
HV = 700V
time [ns]

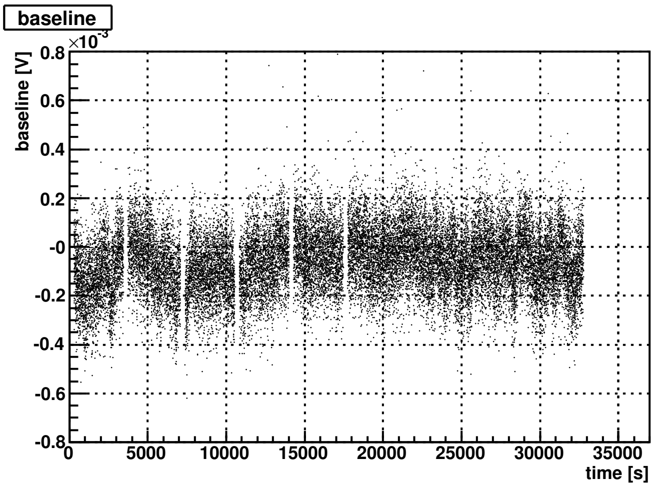

Current [A]
$\times 10^{-6}$
time [s]


amplitudes
amplitude [V]
time [s]

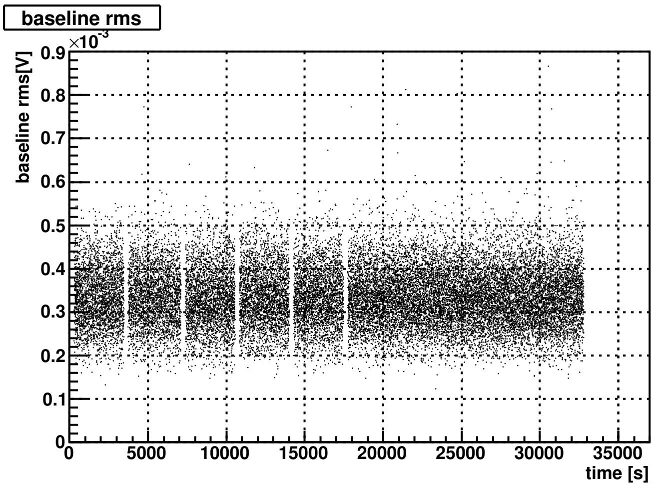

Signal to noise
SNR
voltage [V]


Occupancy vs Threshold, HV=700V
Occupancy
Signal ($U_{cut}$=1.0mV)
Noise
$U_{thr}$ [V]

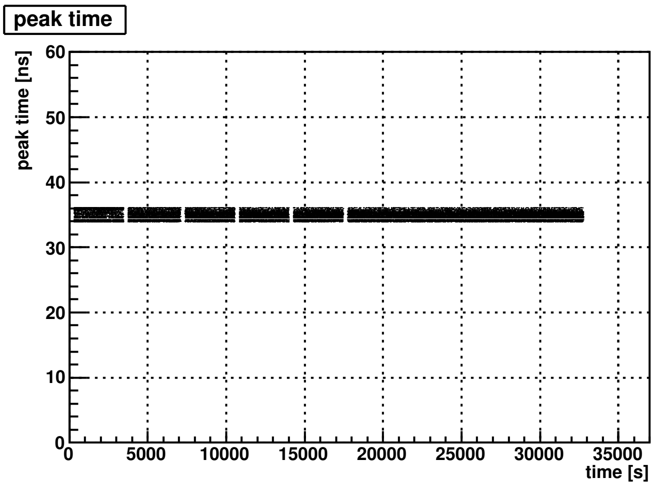

Efficiency vs Threshold, HV=1000V, $U_{cut}$=1.0mV
Efficiency
$U_{thr}$ [V]



baseline
$\times 10^{-3}$
baseline [V]
0.8
0.6
0.4
0.2
-0
-0.2
-0.4
-0.6
-0.8
0
5000
10000
15000
20000
25000
30000
35000
time [s]

baseline rms
$\times 10^{-3}$
baseline rms[V]
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
5000
10000
15000
20000
25000
30000
35000
time [s]

peak time
peak time [ns]
60
50
40
30
20
10
0
5000
10000
15000
20000
25000
30000
35000
time [s]

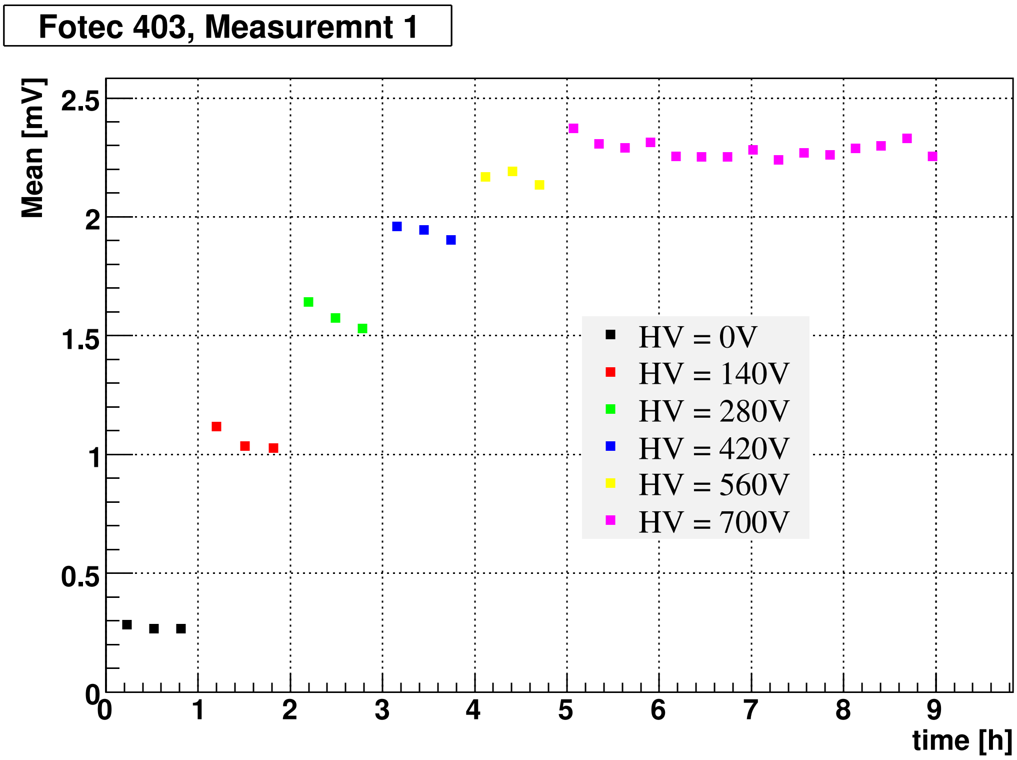



Figure 1: Time dependence of signal mean value. Mean values extracted from graphs on the next few pages.

Signal spectra at different time intervals:

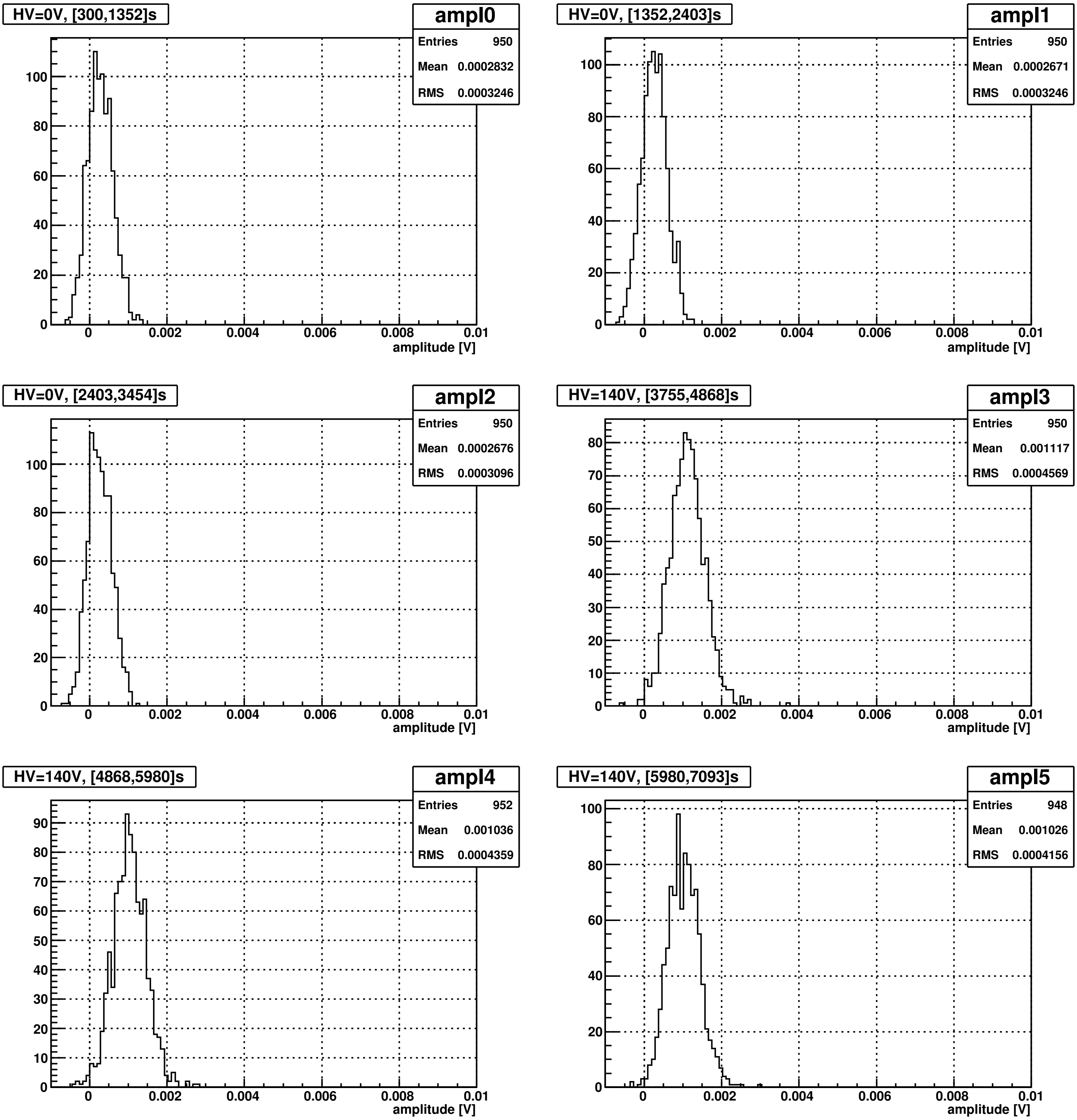



Figure 2: Time dependence of signal mean value.

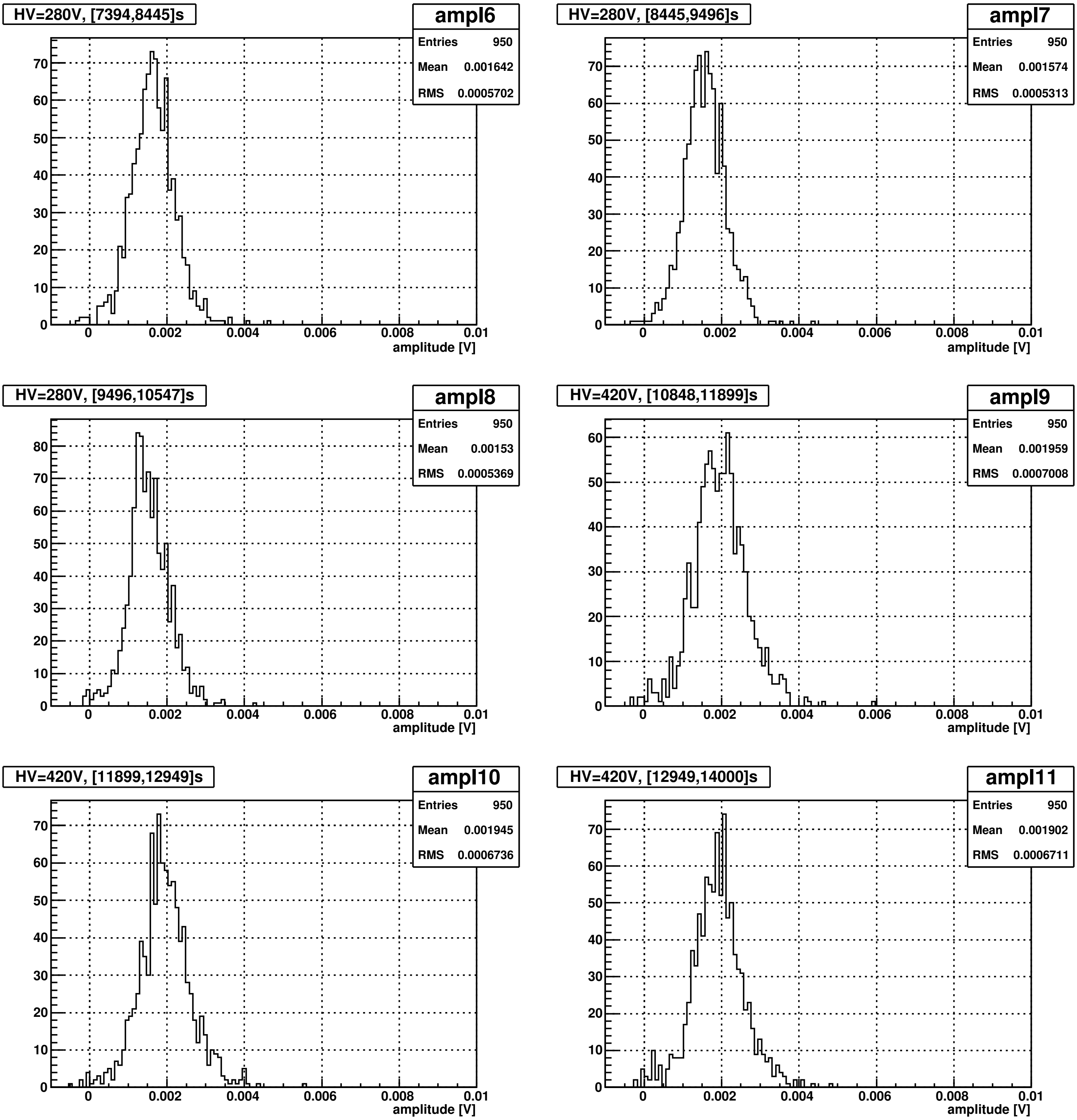



Figure 3: Time dependence of signal mean value.

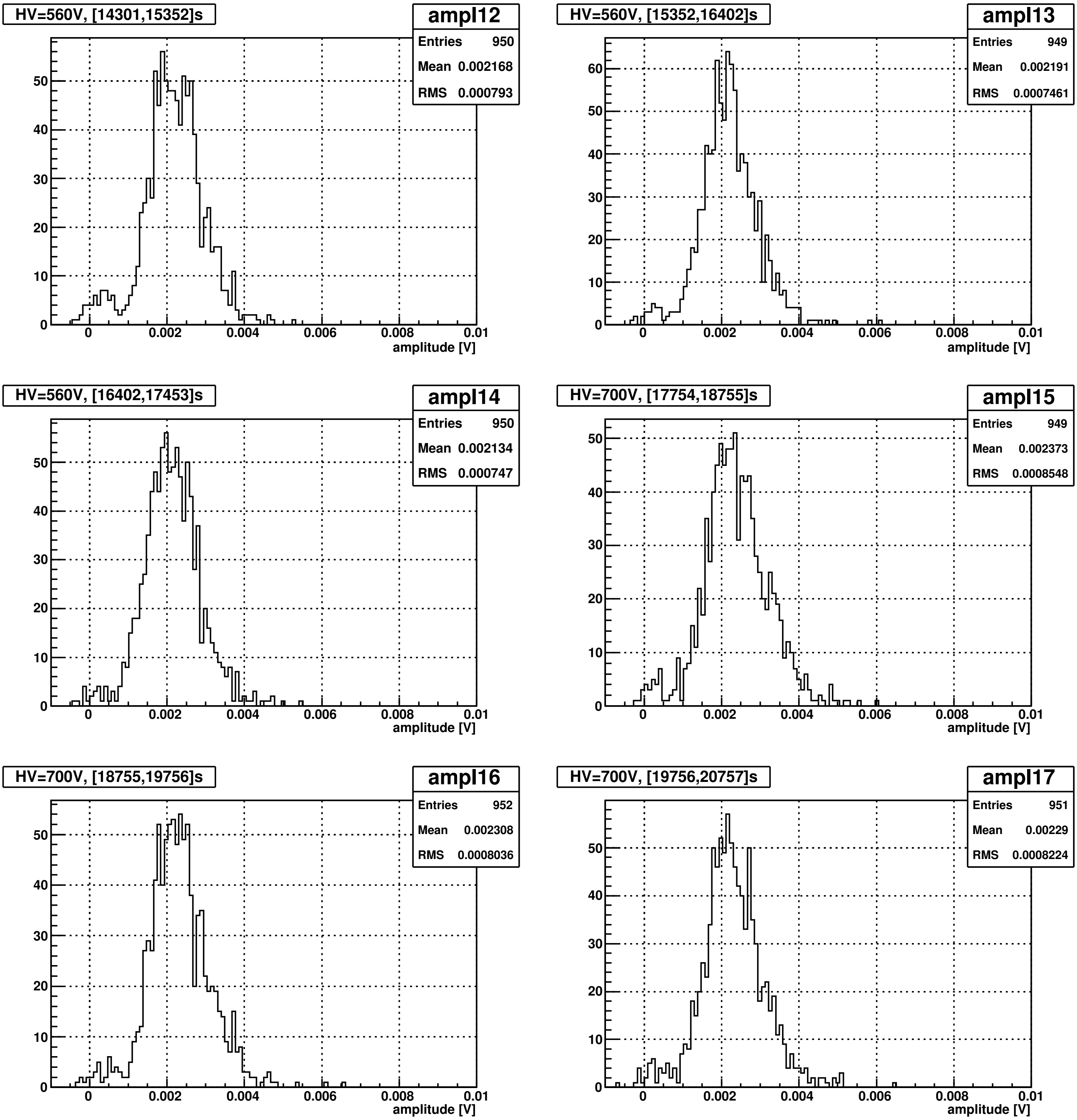



Figure 4: Time dependence of signal mean value.

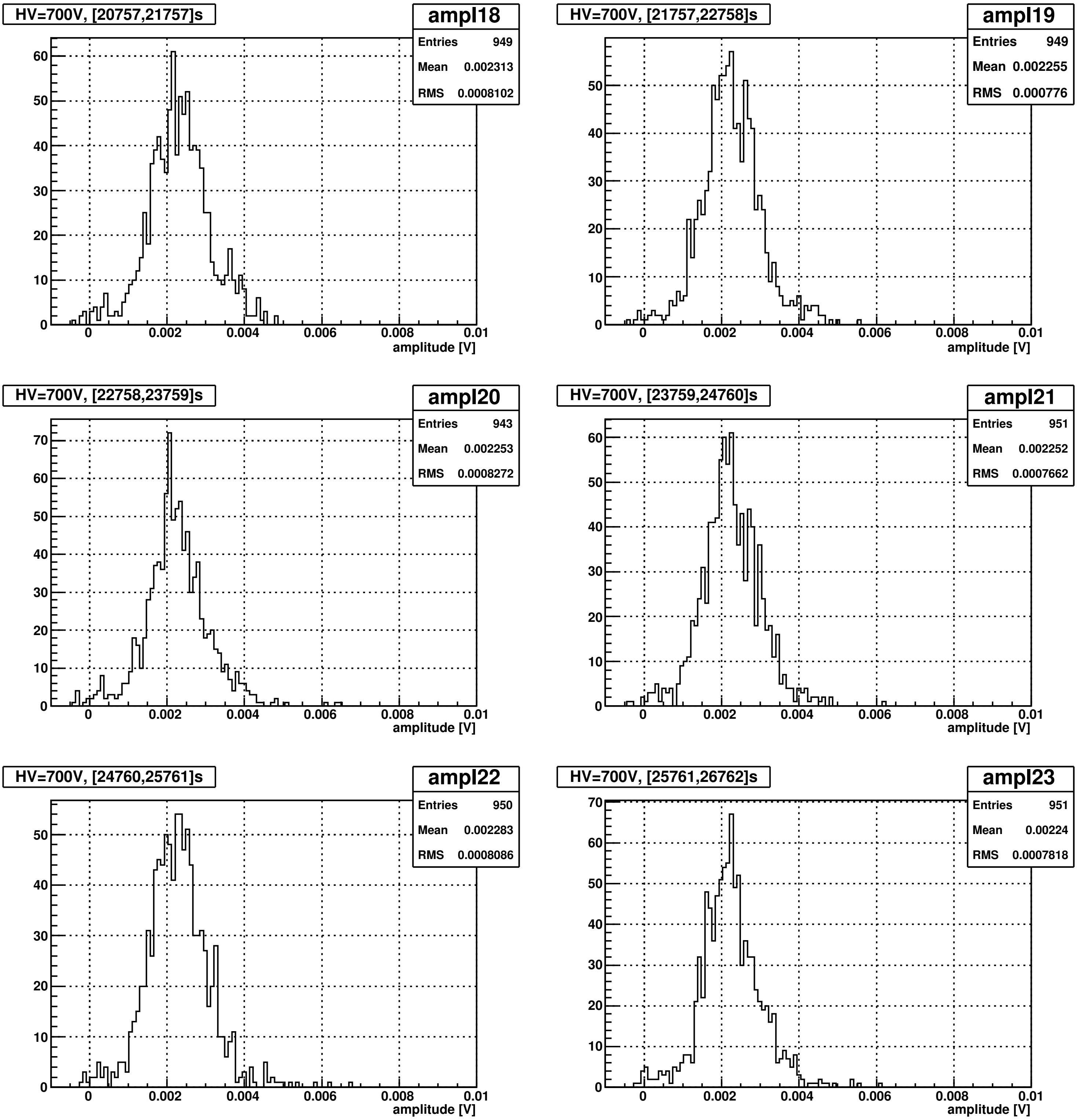



Figure 5: Time dependence of signal mean value.

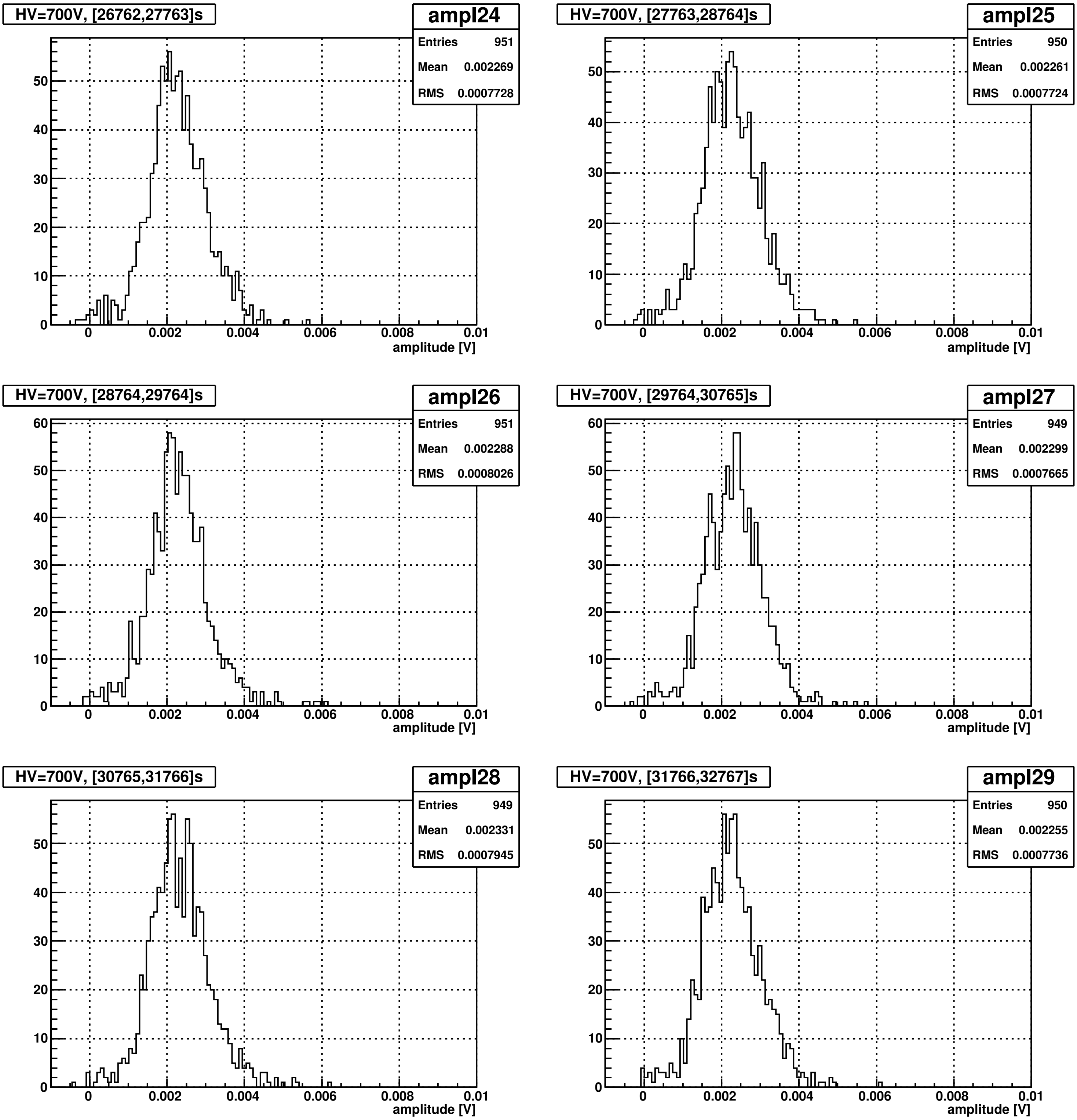



Figure 6: Time dependence of signal mean value.

Data File = SP_050923175529_Fotec403-ASC-D-0230-7_ASC-D-0230-5-measurement1.xls
Upper Diamond = ASC-D-0230-7, $\sim 310 \mu m$ thick, Au metailzation
Lower Diamond = ASC-D-0230-5, $\sim 310 \mu m$ thick, Au metailzation