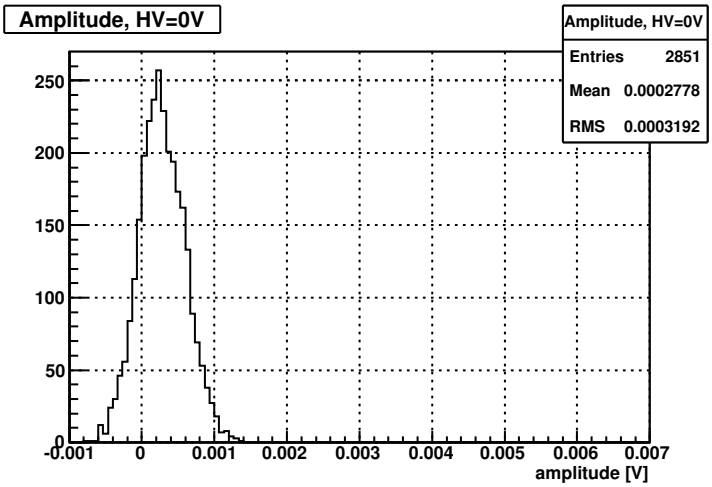
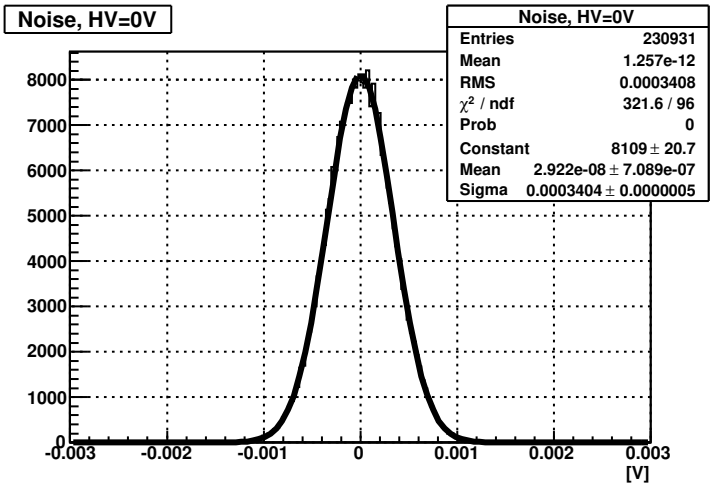
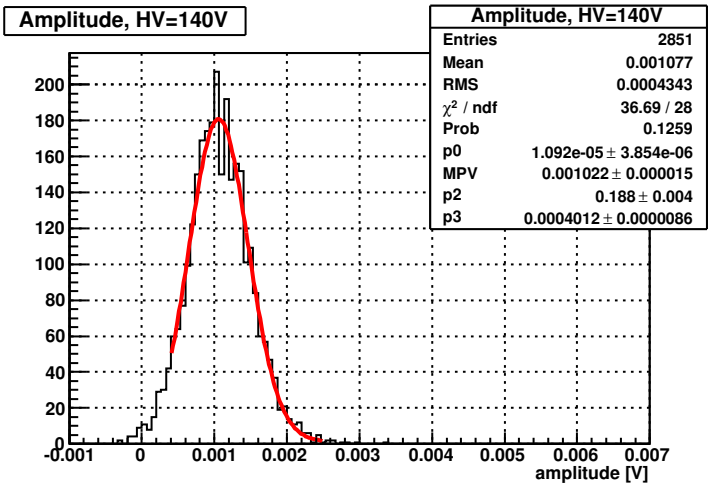
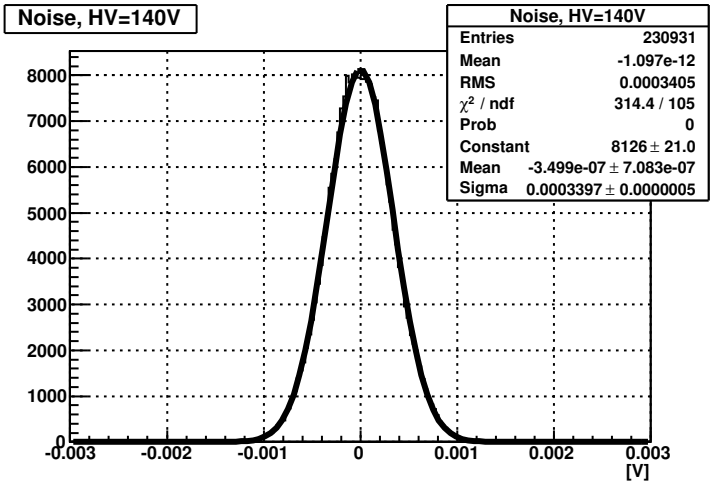
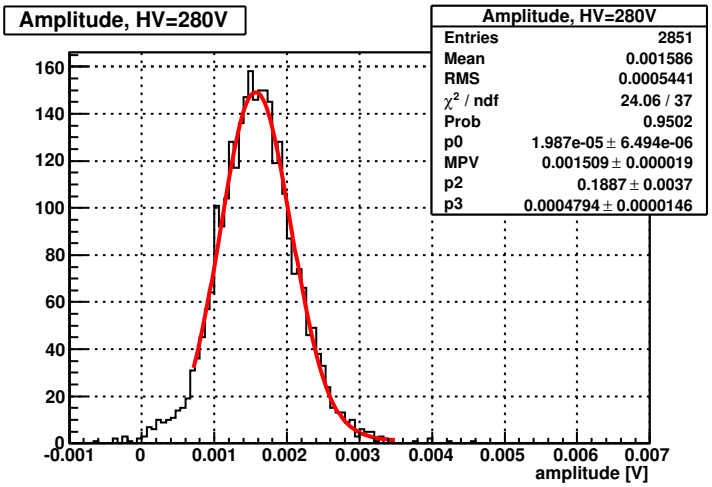
Fotec Box 403 (ASC-D-0230-7 and ASC-D-0230-5), Measurement 1 (BWL 200MHz)

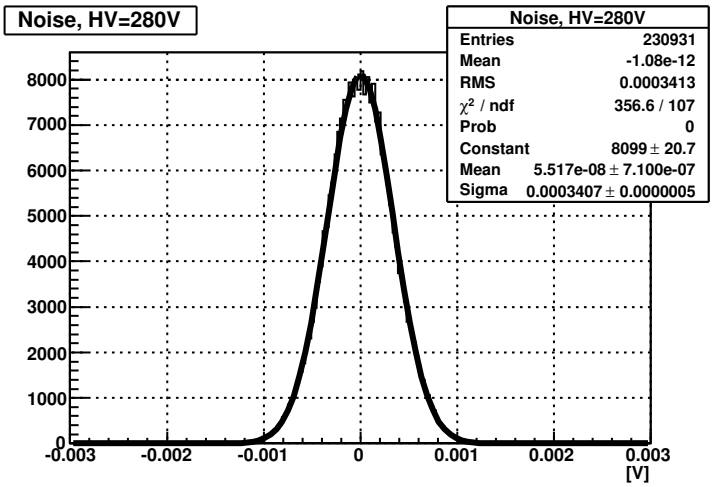


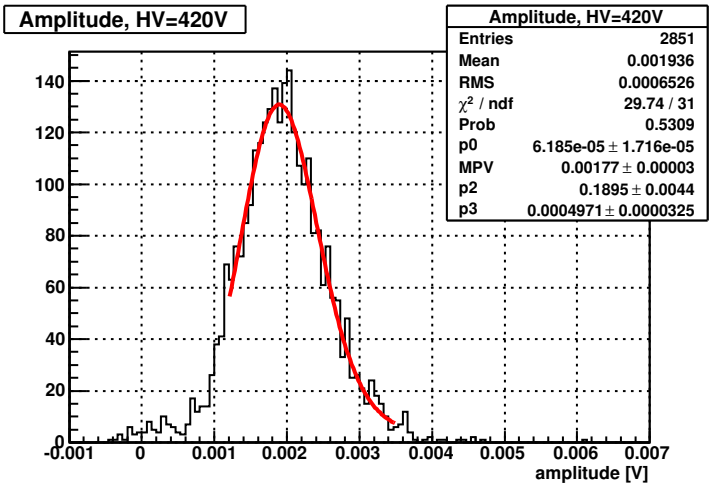


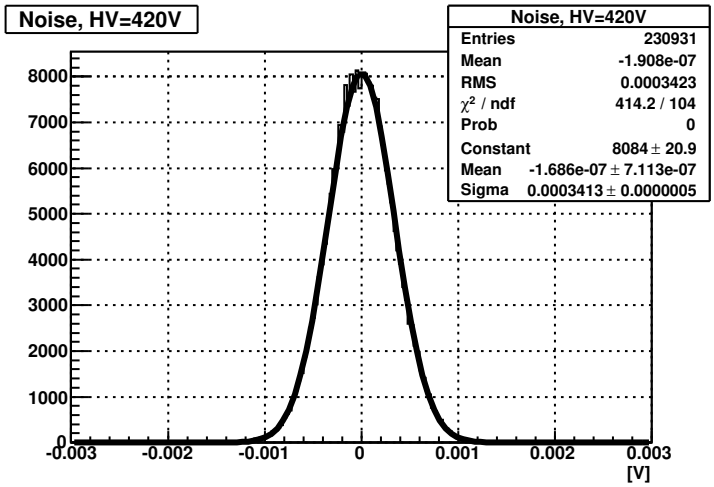


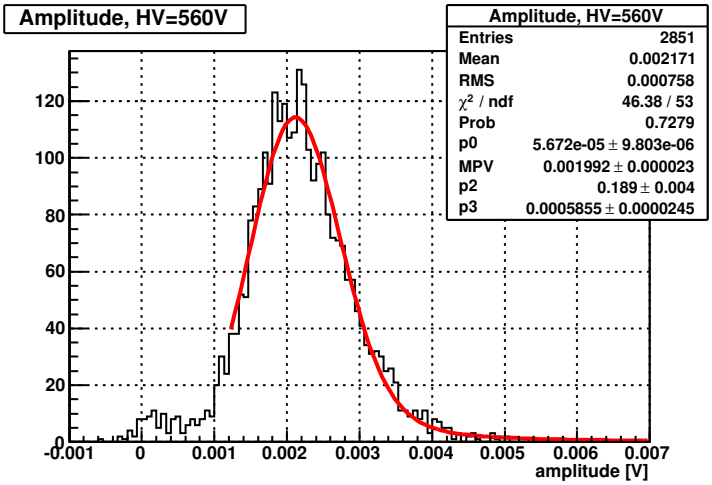


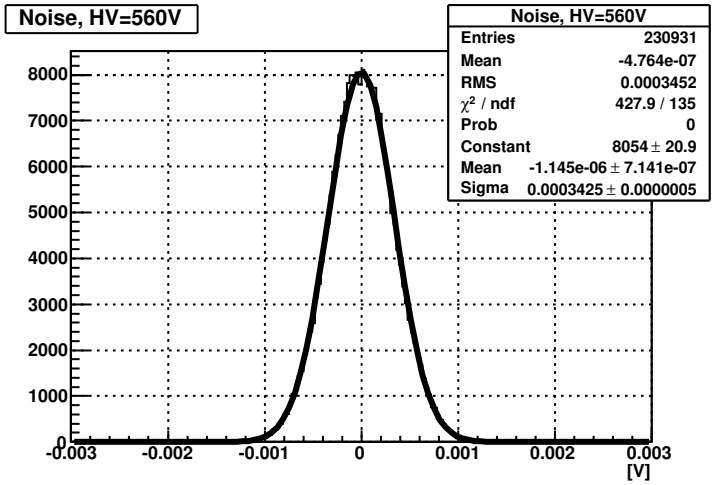


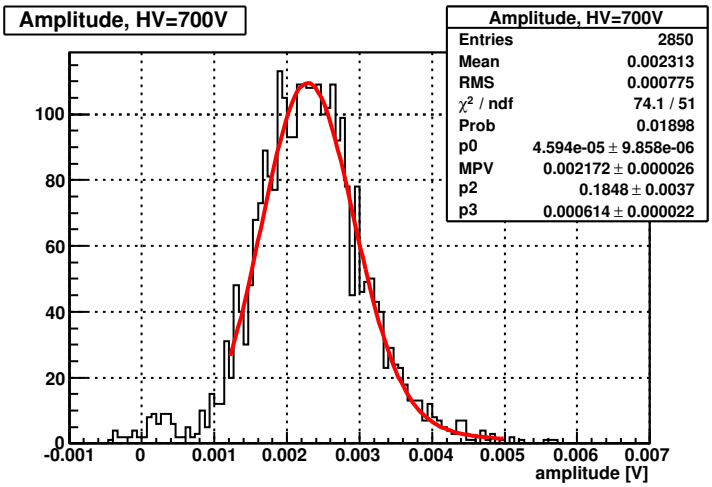


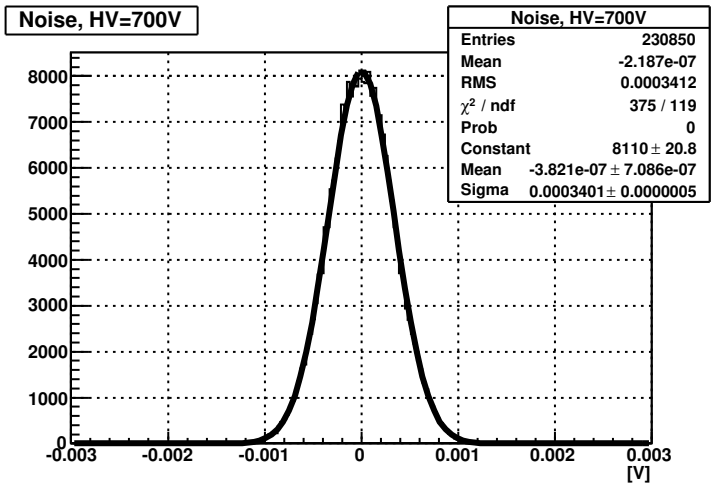

Amplitude, HV=420V
Amplitude, HV=420V
Entries 2851
Mean 0.001936
RMS 0.0006526
χ² / ndf 29.74 / 31
Prob 0.5309
p0 6.185e-05 ± 1.716e-05
MPV 0.00177 ± 0.00003
p2 0.1895 ± 0.0044
p3 0.0004971 ± 0.0000325
amplitude [V]

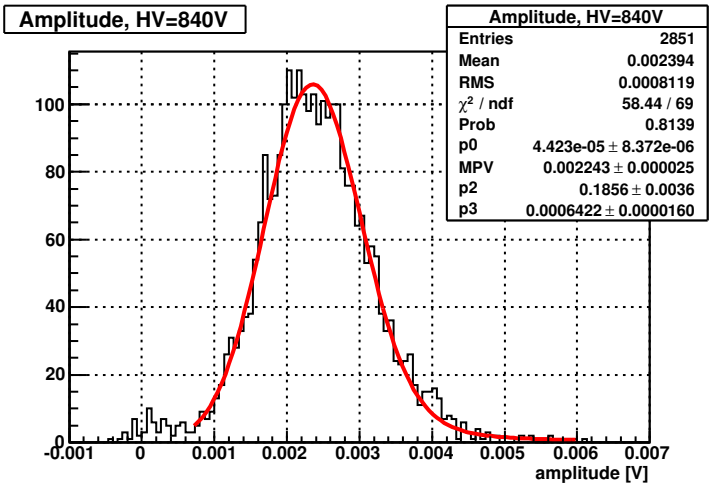

Noise, HV=420V
Noise, HV=420V
Entries 230931
Mean -1.908e-07
RMS 0.0003423
χ² / ndf 414.2 / 104
Prob 0
Constant 8084 ± 20.9
Mean -1.686e-07 ± 7.113e-07
Sigma 0.0003413 ± 0.0000005
[V]

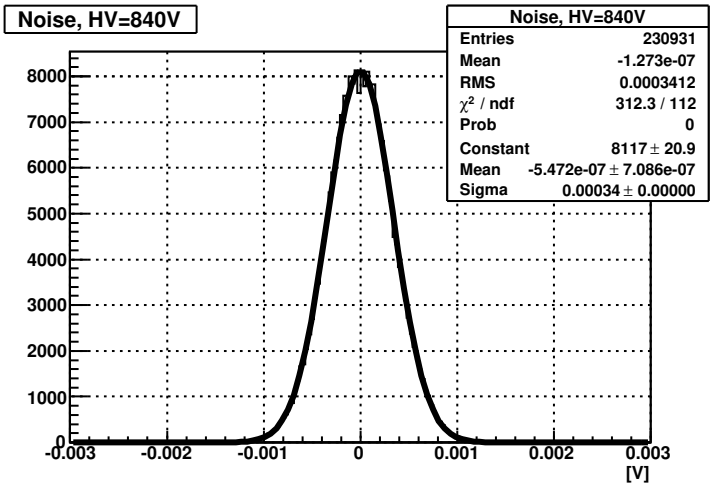

Amplitude, HV=560V
Amplitude, HV=560V
Entries 2851
Mean 0.002171
RMS 0.000758
χ² / ndf 46.38 / 53
Prob 0.7279
p0 5.672e-05 ± 9.803e-06
MPV 0.001992 ± 0.000023
p2 0.189 ± 0.004
p3 0.0005855 ± 0.0000245
amplitude [V]

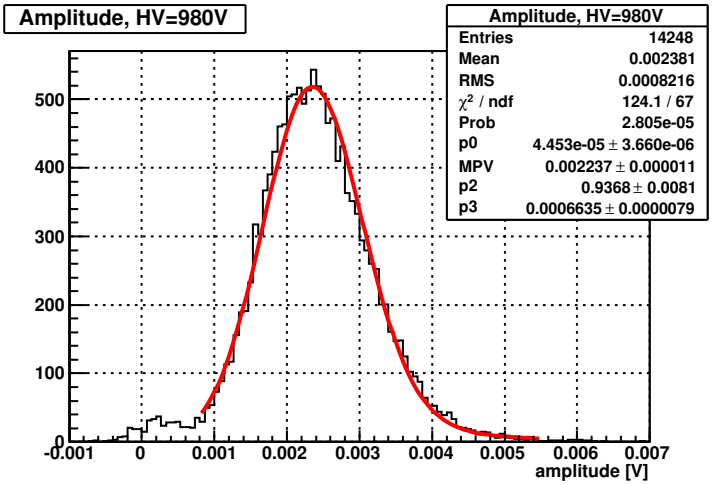

Noise, HV=560V
Noise, HV=560V
Entries 230931
Mean -4.764e-07
RMS 0.0003452
χ² / ndf 427.9 / 135
Prob 0
Constant 8054 ± 20.9
Mean -1.145e-06 ± 7.141e-07
Sigma 0.0003425 ± 0.0000005
[V]

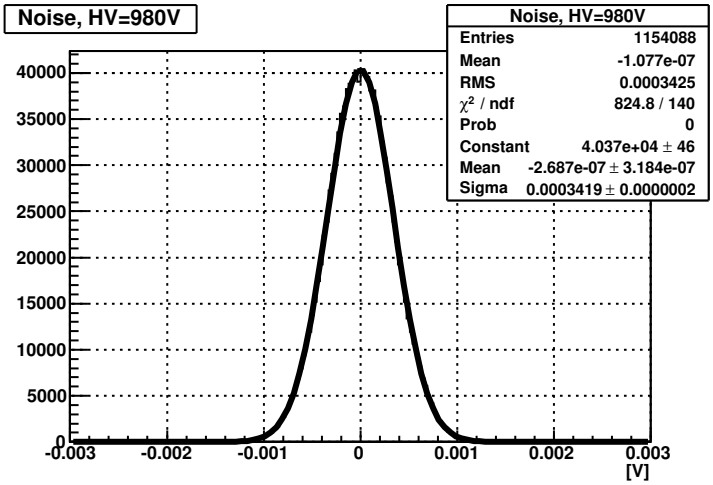

Amplitude, HV=700V
Amplitude, HV=700V
Entries 2850
Mean 0.002313
RMS 0.000775
χ² / ndf 74.1 / 51
Prob 0.01898
p0 4.594e-05 ± 9.858e-06
MPV 0.002172 ± 0.000026
p2 0.1848 ± 0.0037
p3 0.000614 ± 0.000022
amplitude [V]


Noise, HV=700V
Noise, HV=700V
Entries 230850
Mean -2.187e-07
RMS 0.0003412
χ² / ndf 375 / 119
Prob 0
Constant 8110 ± 20.8
Mean -3.821e-07 ± 7.086e-07
Sigma 0.0003401 ± 0.0000005
[V]

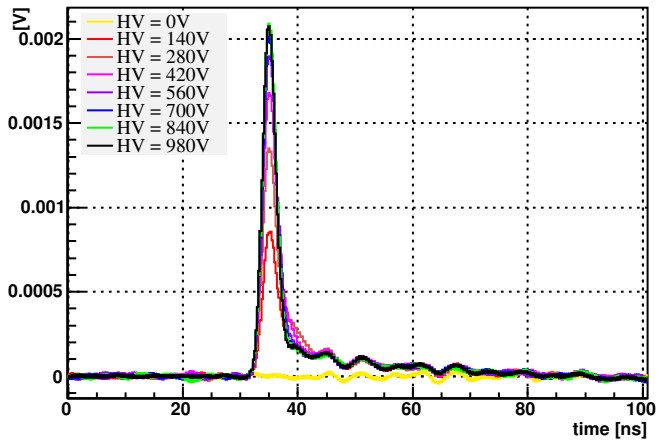

Amplitude, HV=840V
Amplitude, HV=840V
Entries 2851
Mean 0.002394
RMS 0.0008119
χ² / ndf 58.44 / 69
Prob 0.8139
p0 4.423e-05 ± 8.372e-06
MPV 0.002243 ± 0.000025
p2 0.1856 ± 0.0036
p3 0.0006422 ± 0.0000160
amplitude [V]

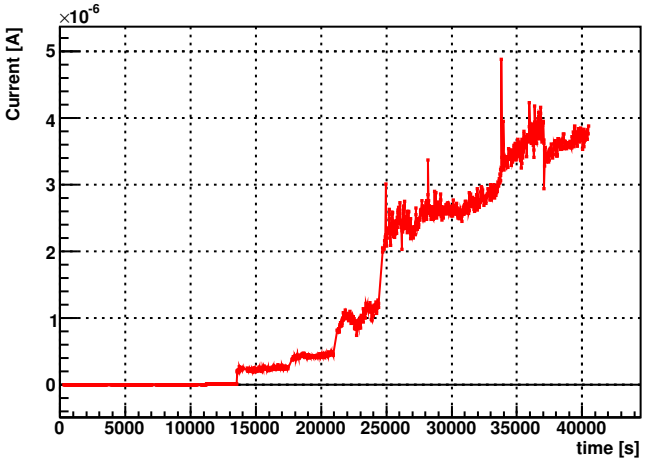

Noise, HV=840V
Noise, HV=840V
Entries 230931
Mean -1.273e-07
RMS 0.0003412
χ² / ndf 312.3 / 112
Prob 0
Constant 8117 ± 20.9
Mean -5.472e-07 ± 7.086e-07
Sigma 0.00034 ± 0.00000
[V]


Amplitude, HV=980V
Amplitude, HV=980V
Entries 14248
Mean 0.002381
RMS 0.0008216
χ² / ndf 124.1 / 67
Prob 2.805e-05
p0 4.453e-05 ± 3.660e-06
MPV 0.002237 ± 0.000011
p2 0.9368 ± 0.0081
p3 0.0006635 ± 0.0000079
amplitude [V]

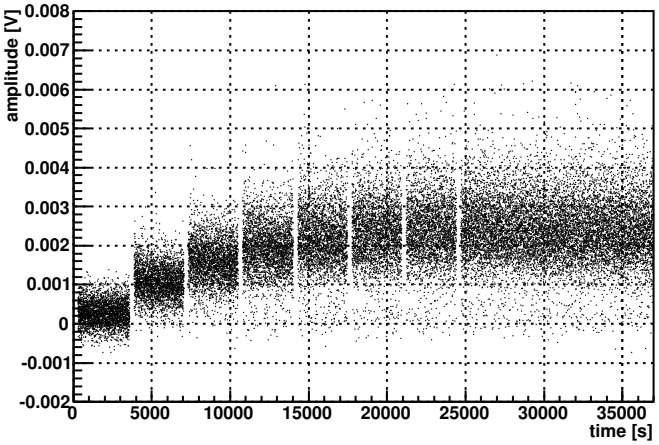

Noise, HV=980V
Noise, HV=980V
Entries 1154088
Mean -1.077e-07
RMS 0.0003425
χ² / ndf 824.8 / 140
Prob 0
Constant 4.037e+04 ± 46
Mean -2.687e-07 ± 3.184e-07
Sigma 0.0003419 ± 0.0000002
[V]

Average event

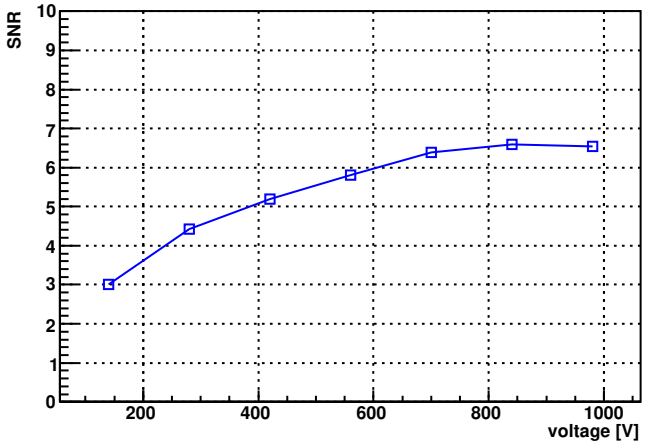




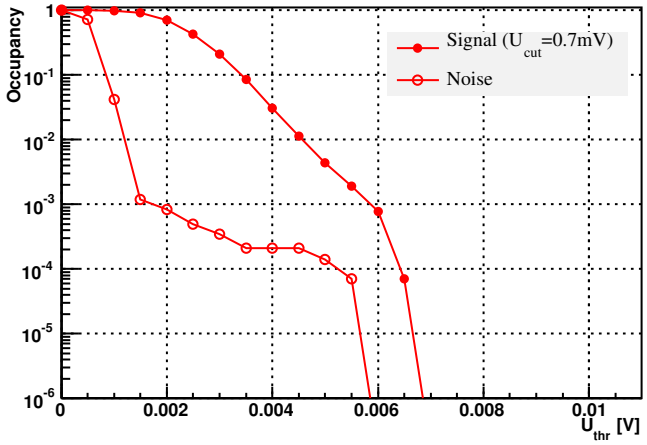
amplitudes



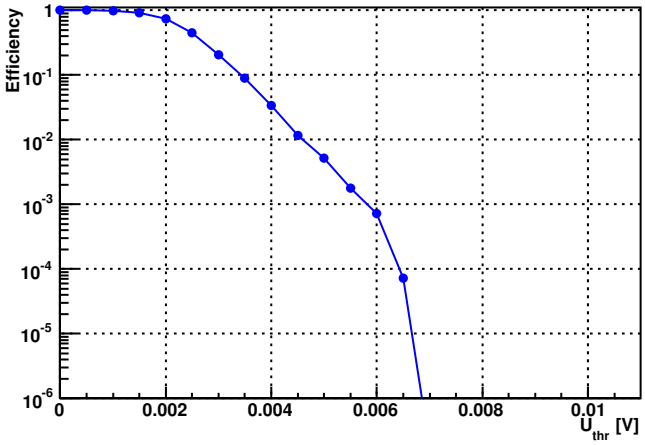
Signal to noise



Occupancy vs Threshold, HV=980V



Efficiency vs Threshold, HV=1000V, U_{cut}=0.7mV



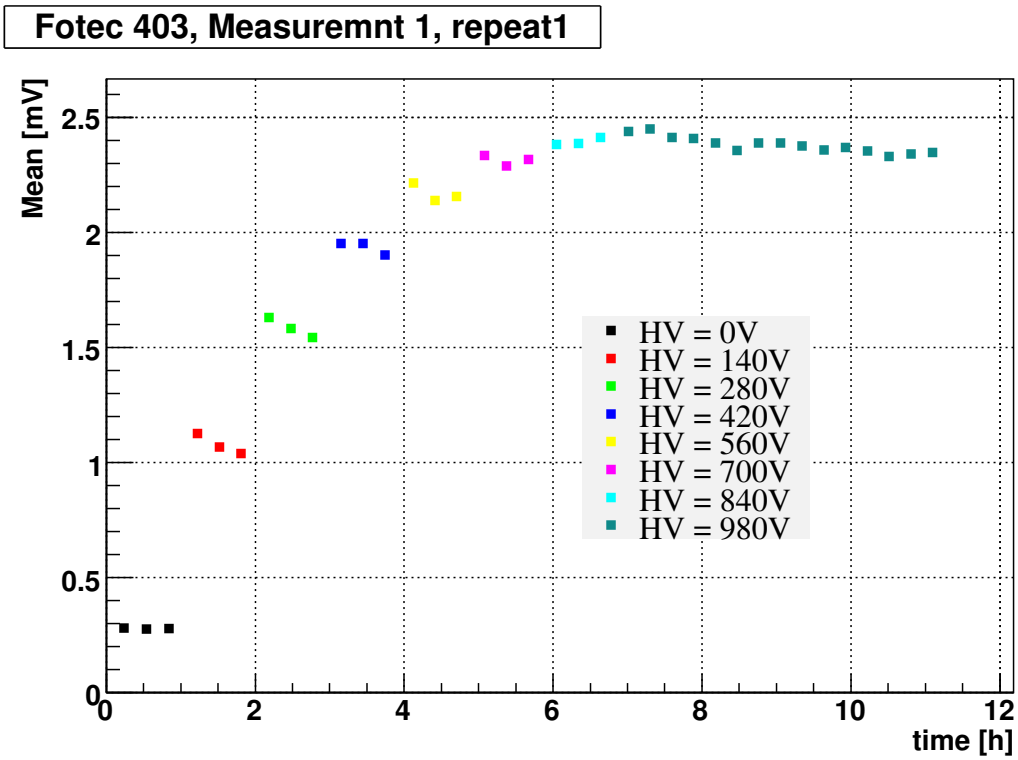


Figure 1: Time dependence of signal mean value. Mean values extracted from graphs on the next few pages.

Signal spectra at different time intervals:

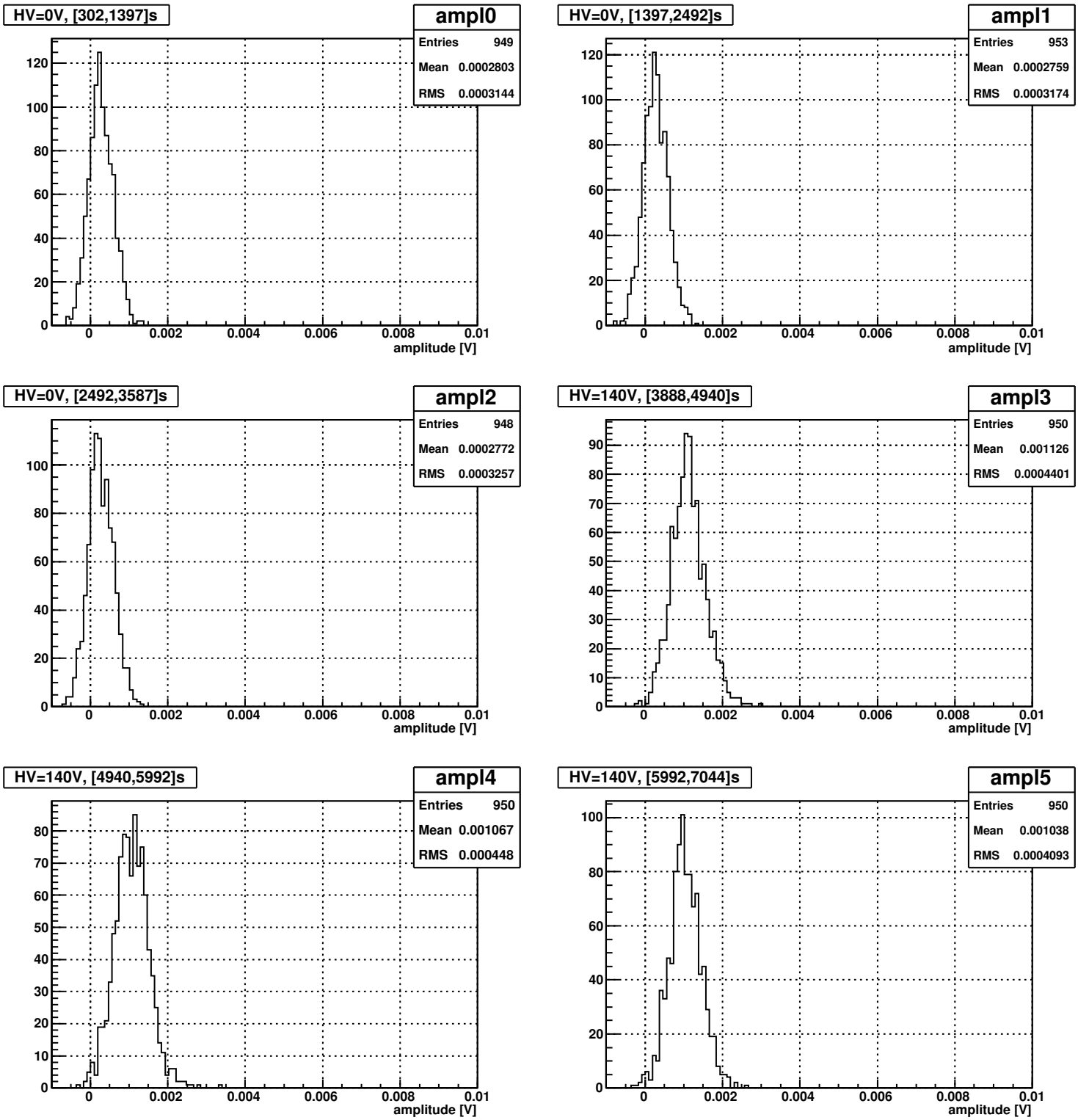


Figure 2: Time dependence of signal mean value.

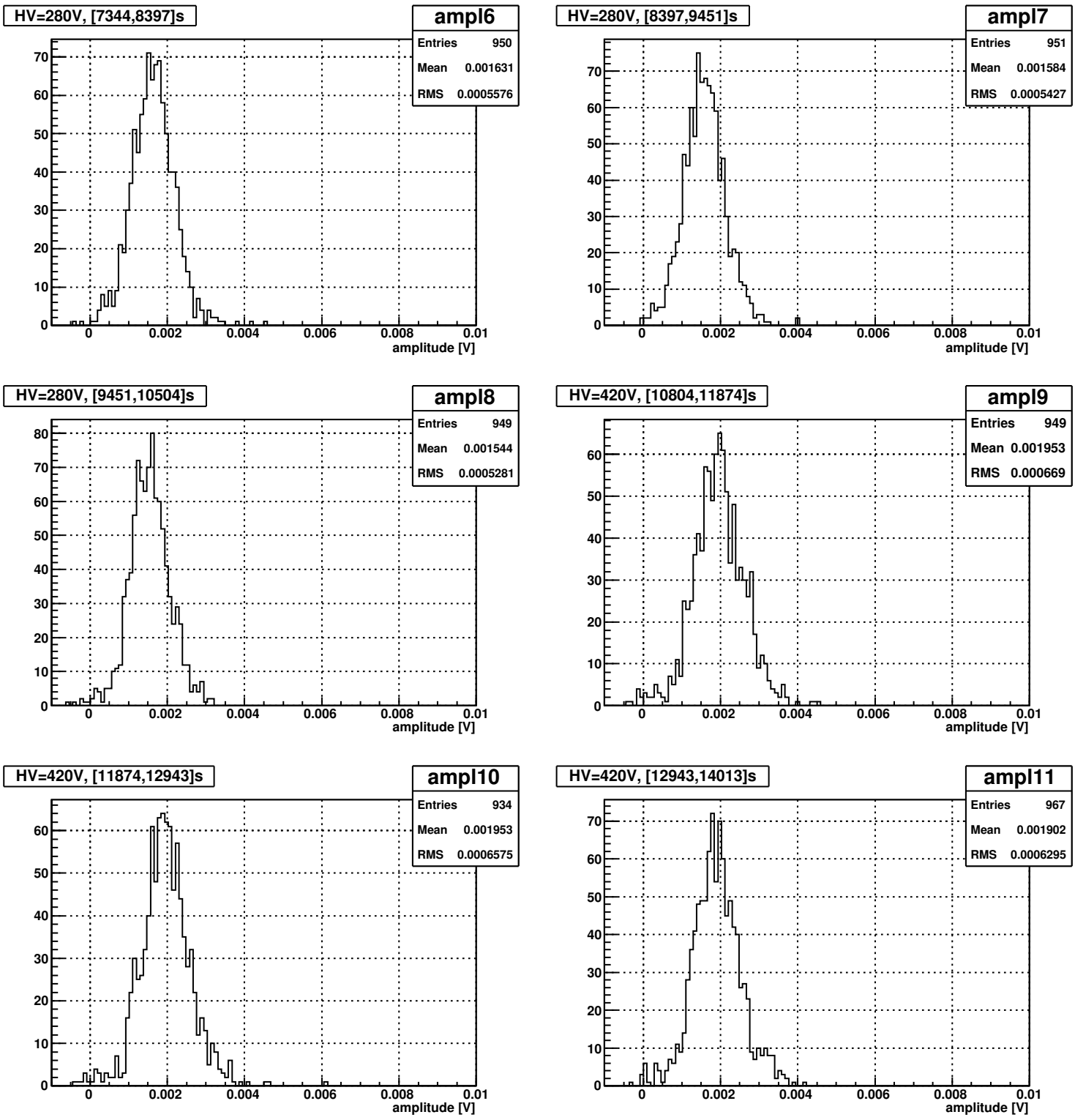


Figure 3: Time dependence of signal mean value.

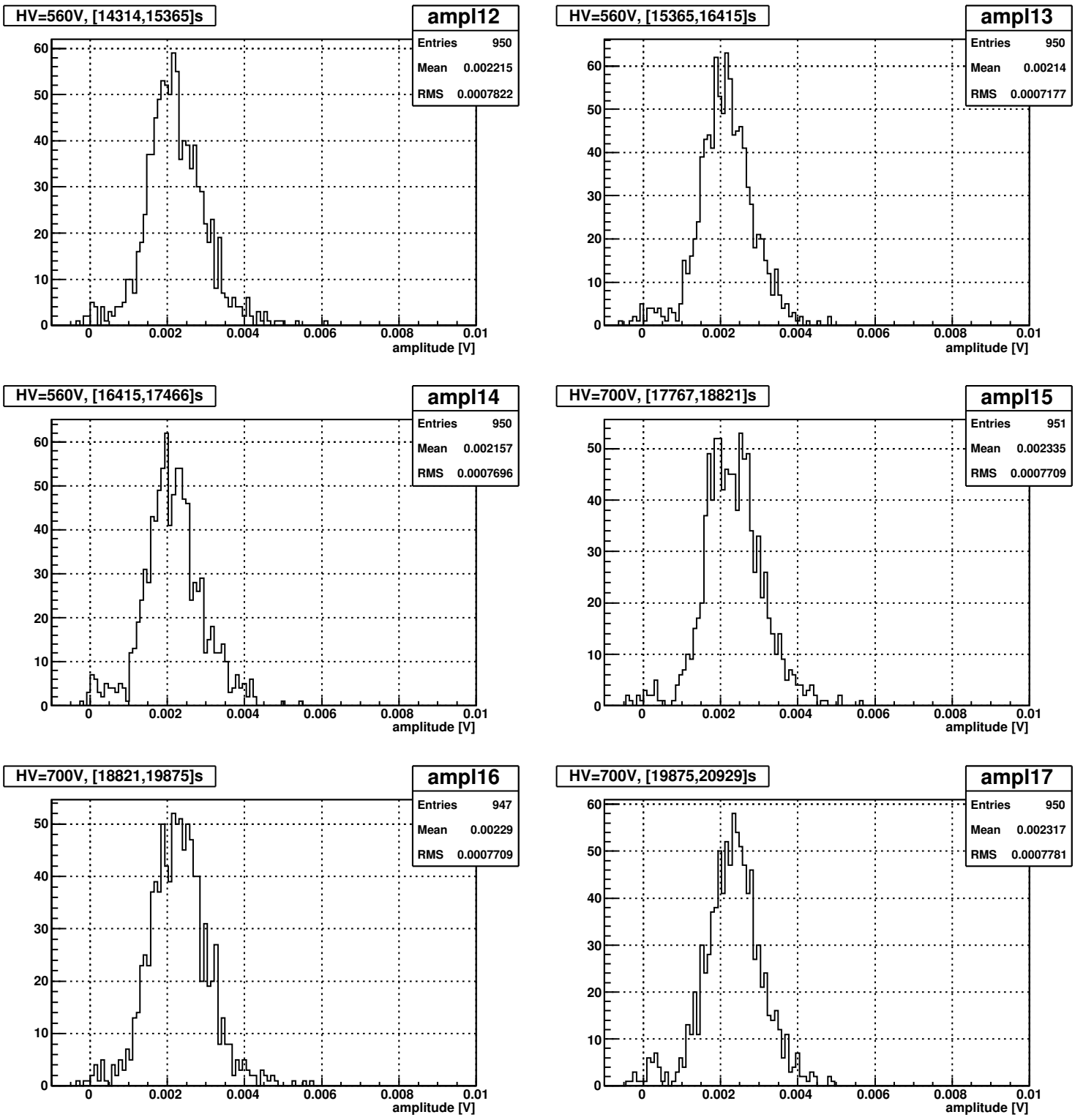


Figure 4: Time dependence of signal mean value.

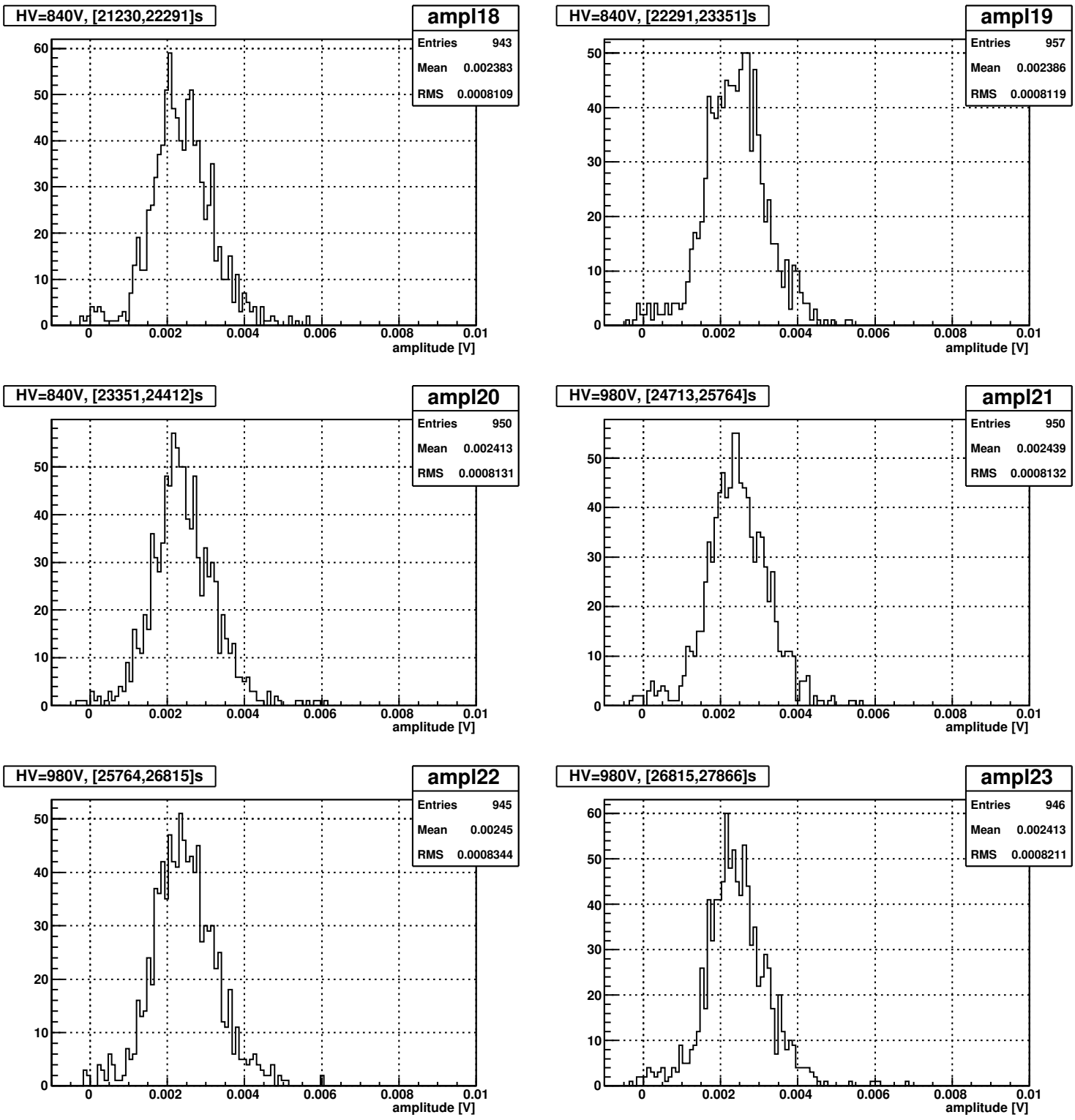


Figure 5: Time dependence of signal mean value.

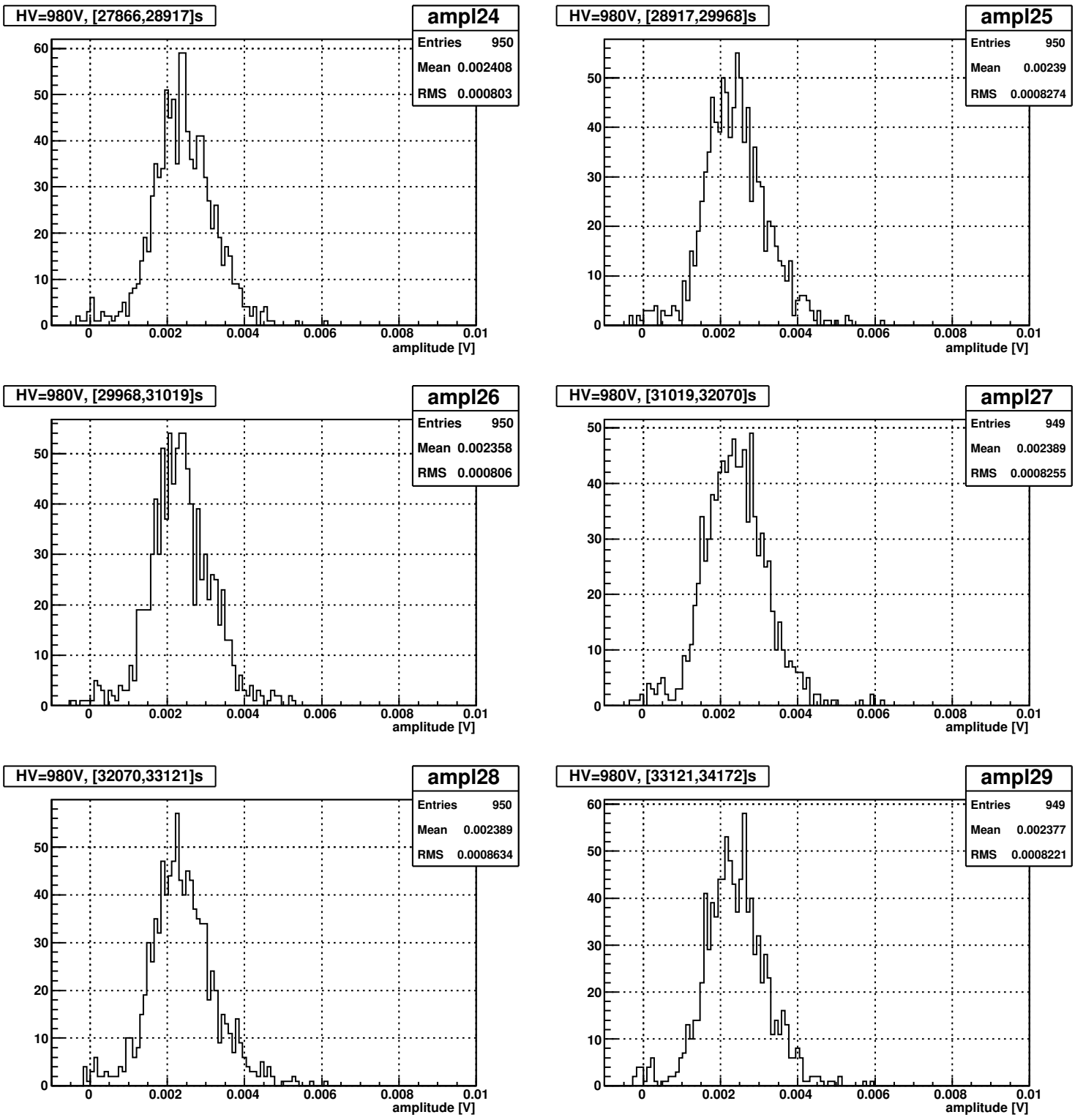


Figure 6: Time dependence of signal mean value.

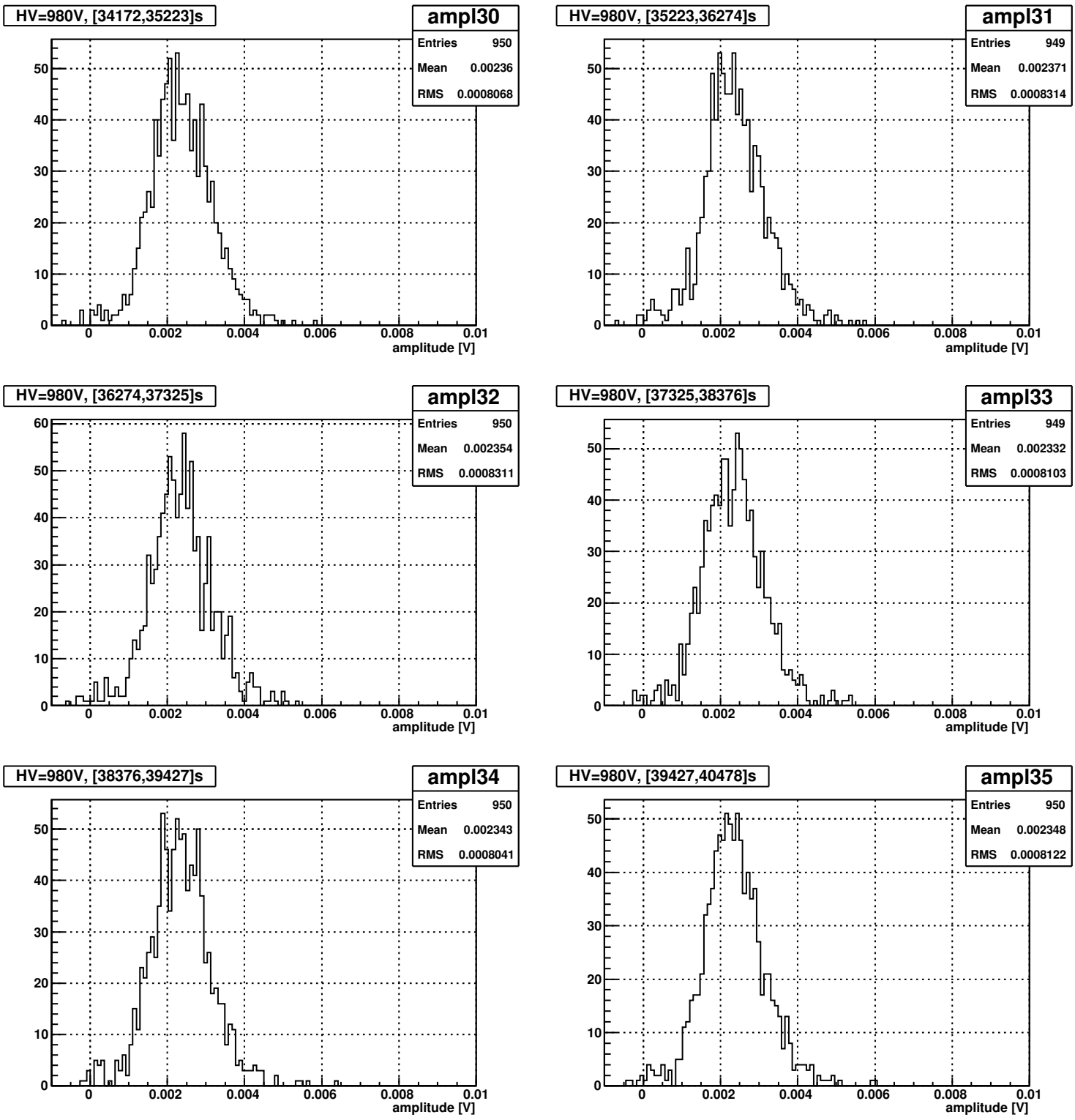


Figure 7: Time dependence of signal mean value.

Data File = SP_050926204049_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