

Artificial Eye Measurement Performed on 10-Jul-2018 On DDPI

1 Summary

- 1). Generally, the noise level is pretty low.
- 2). For large amplitude motions, there is a large jerk before the motion, which could be down (5V) or up (2.5V).
- 2). There are some unusual noise for amplitudes of 1.5V, 2V and 2.5V.

2 Figures

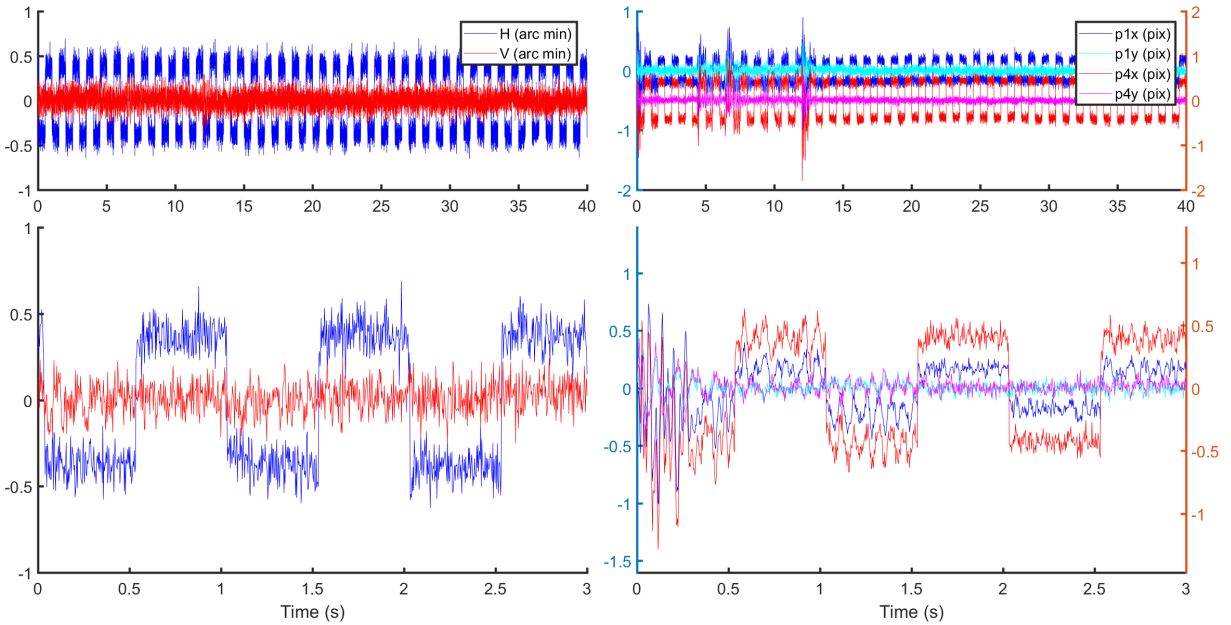


Figure 1: $Amp = 0.050V$; $Freq = 1Hz$; $arcmin/pix = 1.566$; $\sigma_H = 0.086$; $\sigma_V = 0.054$; $\sigma_{p1x} = 0.108$; $\sigma_{p1y} = 0.046$; $\sigma_{p4x} = 0.119$; $\sigma_{p4y} = 0.061$ Lower panel shows first 3 seconds from upper panels, and p1x, p1y, p4x, and p4y are centered.

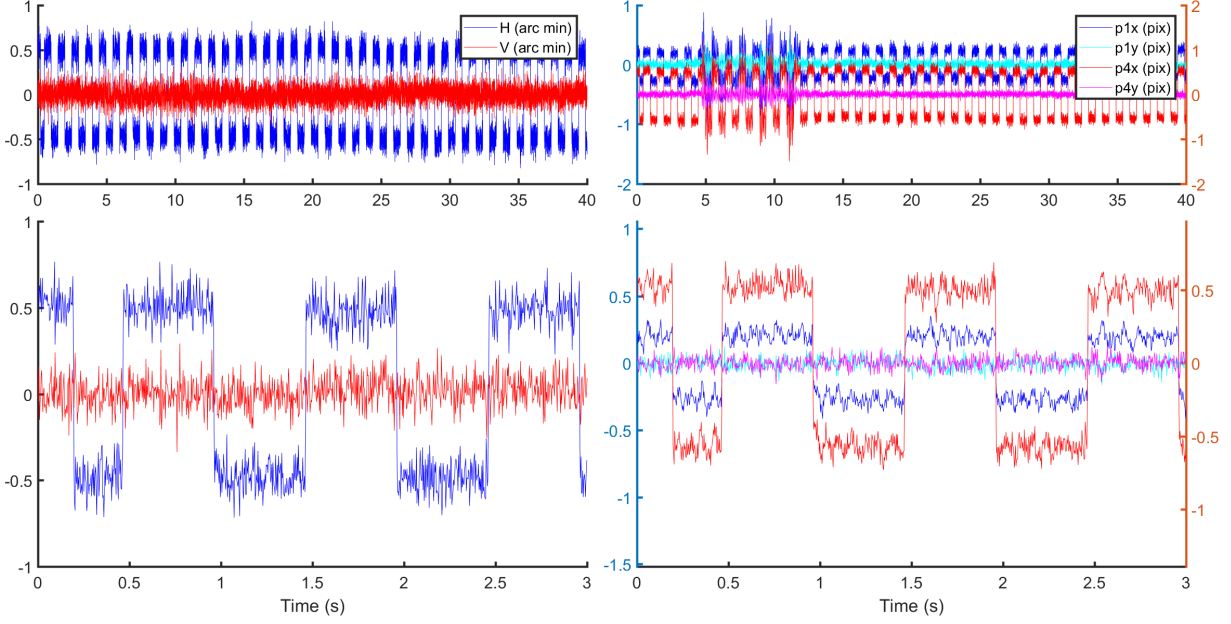


Figure 2: $Amp = 0.065V$; $Freq = 1Hz$; $arcmin/pix = 1.613$; $\sigma_H = 0.088$; $\sigma_V = 0.054$; $\sigma_{p1x} = 0.090$; $\sigma_{p1y} = 0.039$; $\sigma_{p4x} = 0.108$; $\sigma_{p4y} = 0.047$

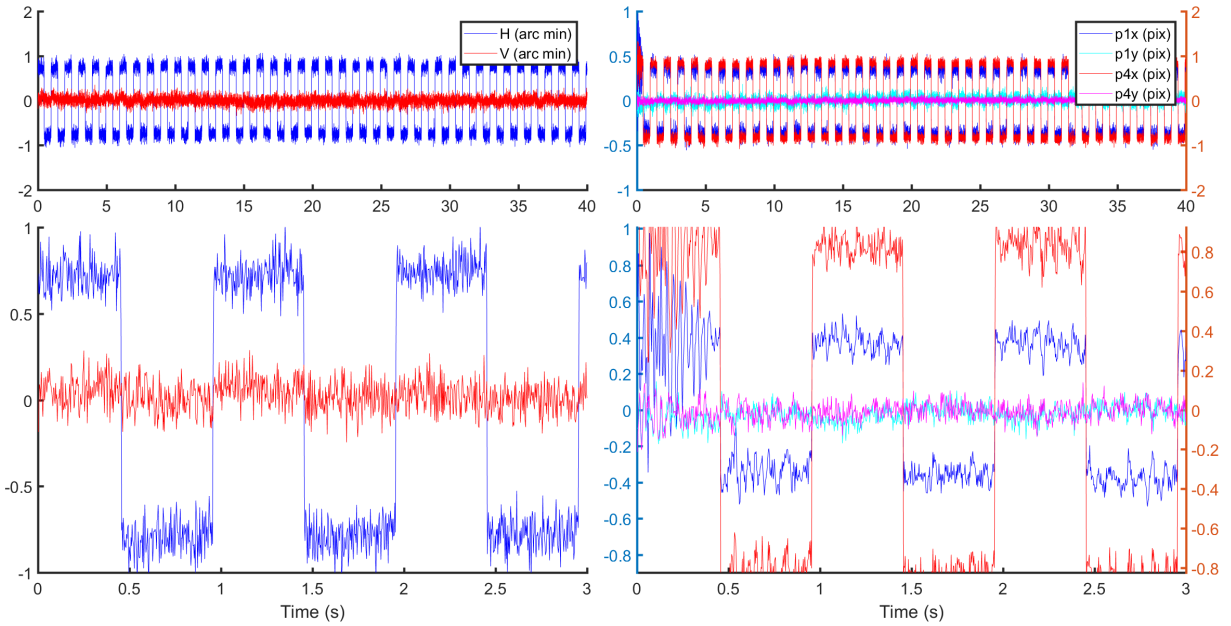


Figure 3: $Amp = 0.100V$; $Freq = 1Hz$; $arcmin/pix = 1.615$; $\sigma_H = 0.089$; $\sigma_V = 0.053$; $\sigma_{p1x} = 0.058$; $\sigma_{p1y} = 0.029$; $\sigma_{p4x} = 0.070$; $\sigma_{p4y} = 0.027$

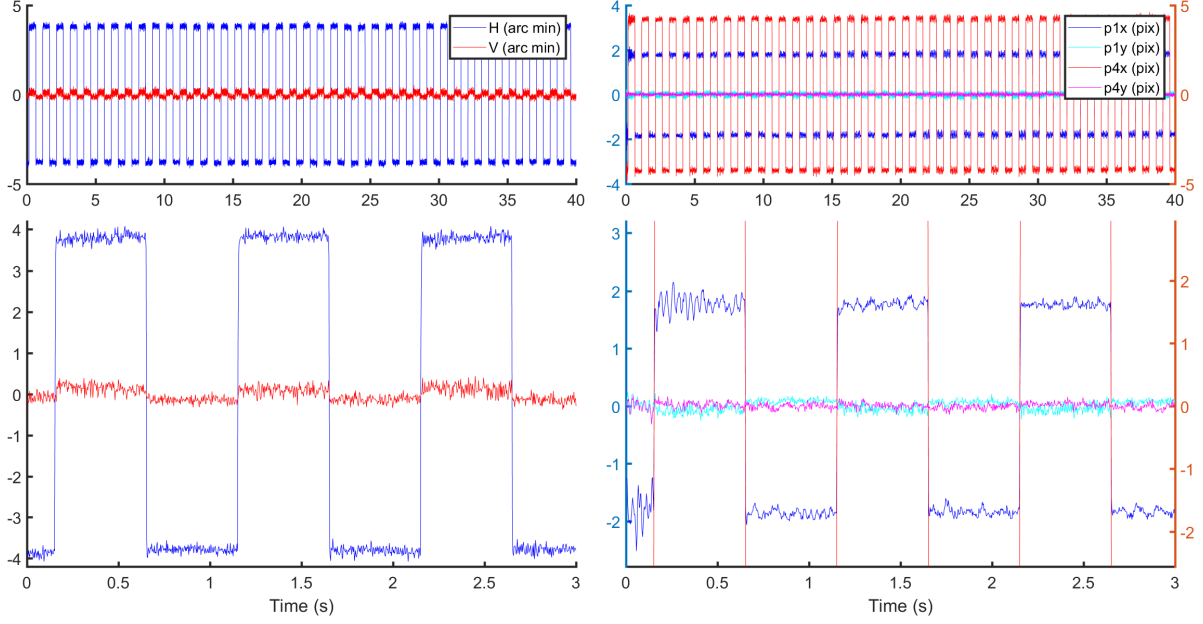


Figure 4: $Amp = 0.500V$; $Freq = 1Hz$; $arcmin/pix = 1.565$; $\sigma_H = 0.094$; $\sigma_V = 0.087$; $\sigma_{p1x} = 0.110$; $\sigma_{p1y} = 0.054$; $\sigma_{p4x} = 0.121$; $\sigma_{p4y} = 0.047$

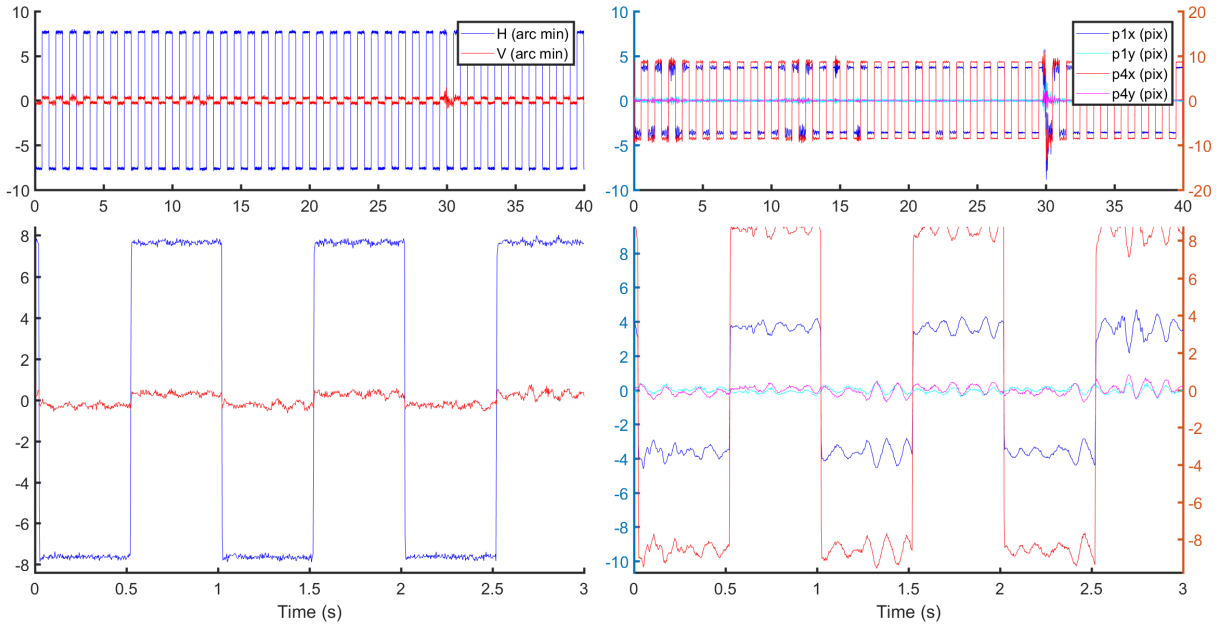


Figure 5: $Amp = 1.000V$; $Freq = 1Hz$; $arcmin/pix = 1.551$; $\sigma_H = 0.090$; $\sigma_V = 0.122$; $\sigma_{p1x} = 0.369$; $\sigma_{p1y} = 0.190$; $\sigma_{p4x} = 0.476$; $\sigma_{p4y} = 0.243$

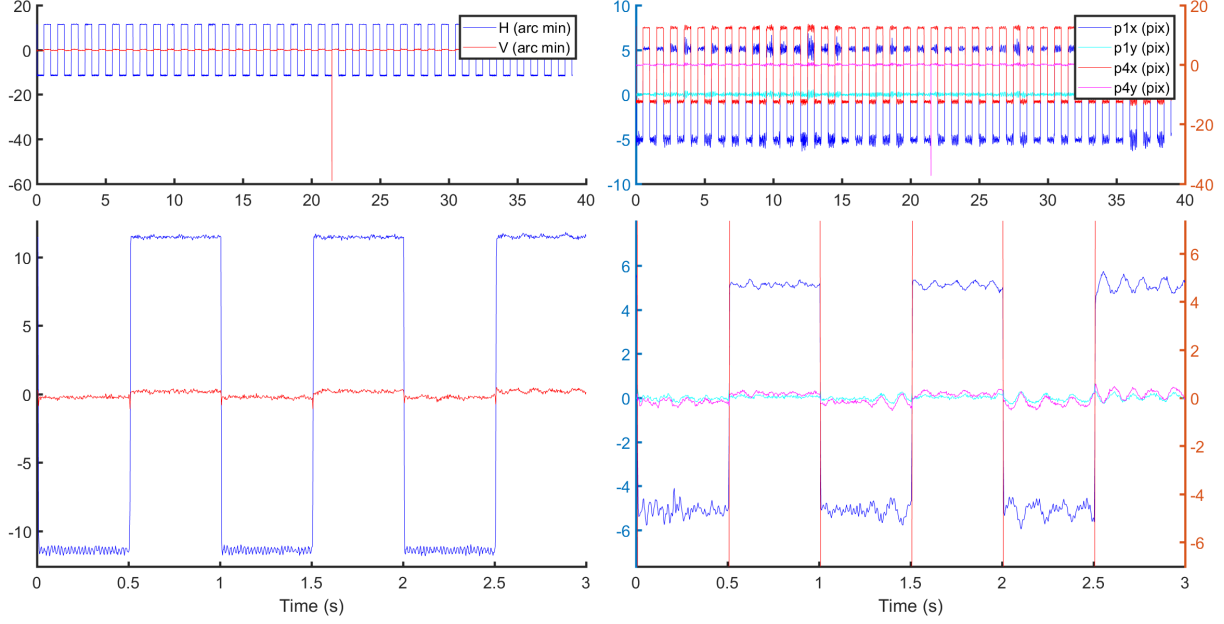


Figure 6: $Amp = 1.500V$; $Freq = 1Hz$; $arcmin/pix = 1.566$; $\sigma_H = 0.162$; $\sigma_V = 0.110$; $\sigma_{p1x} = 0.297$; $\sigma_{p1y} = 0.083$; $\sigma_{p4x} = 0.343$; $\sigma_{p4y} = 0.138$

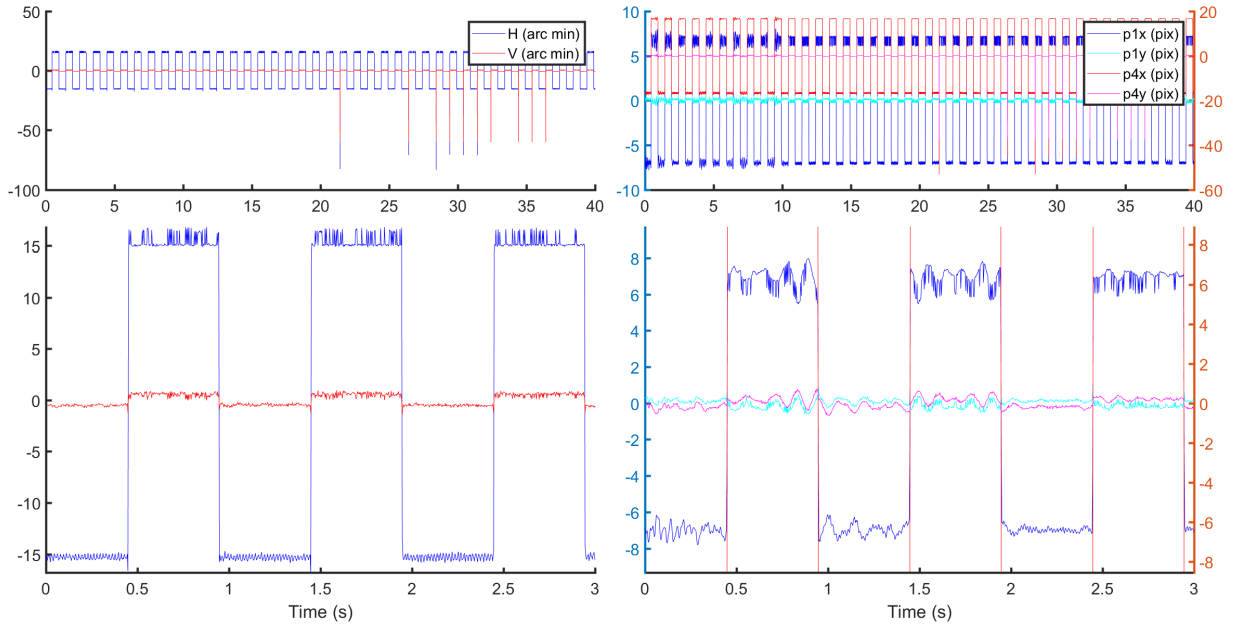


Figure 7: $Amp = 2.000V$; $Freq = 1Hz$; $arcmin/pix = 1.583$; $\sigma_H = 0.412$; $\sigma_V = 0.145$; $\sigma_{p1x} = 0.290$; $\sigma_{p1y} = 0.076$; $\sigma_{p4x} = 0.218$; $\sigma_{p4y} = 0.075$

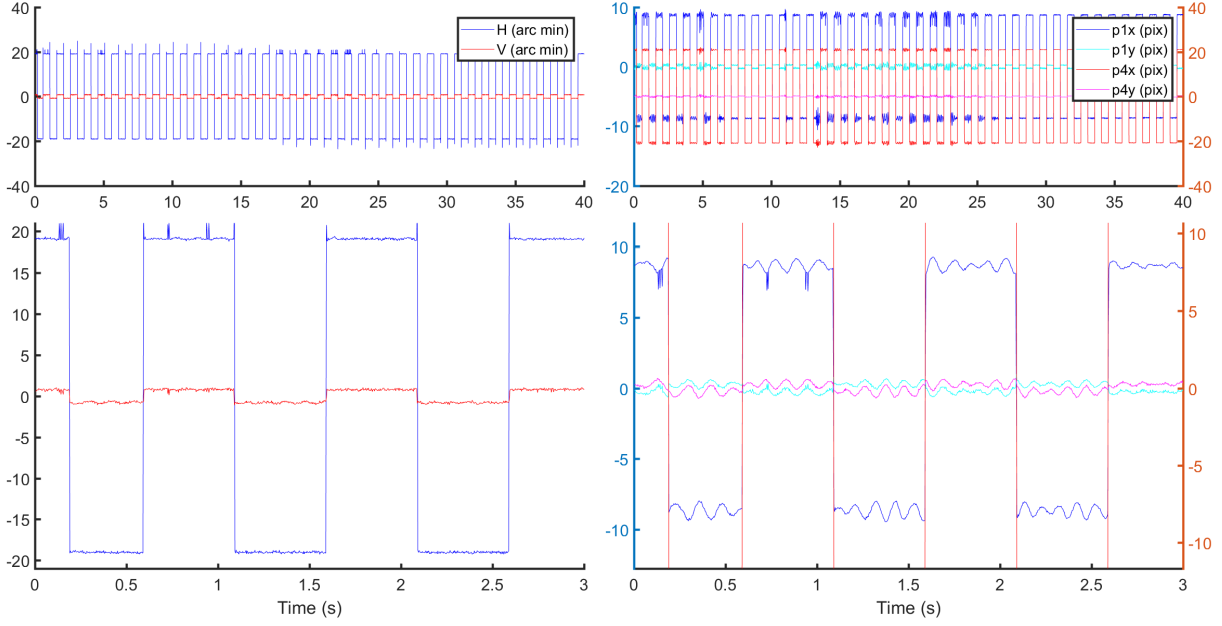


Figure 8: $Amp = 2.500V$; $Freq = 1Hz$; $arcmin/pix = 1.559$; $\sigma_H = 0.102$; $\sigma_V = 0.107$; $\sigma_{p1x} = 0.249$; $\sigma_{p1y} = 0.121$; $\sigma_{p4x} = 0.272$; $\sigma_{p4y} = 0.125$

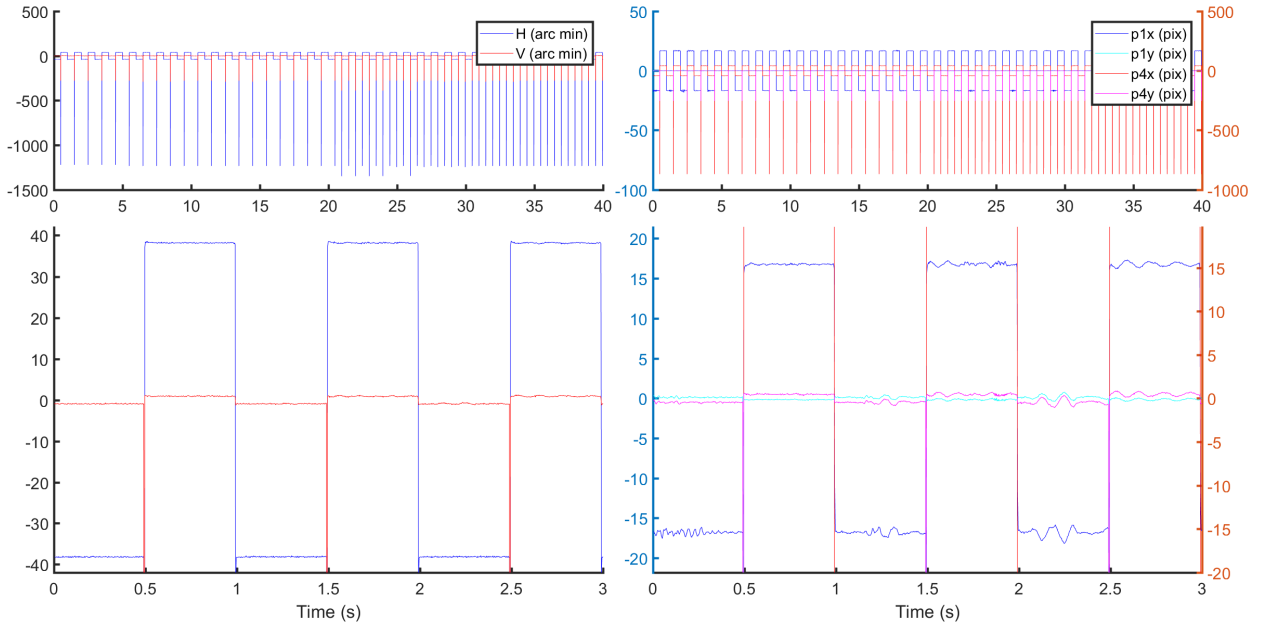


Figure 9: $Amp = 5.000V$; $Freq = 1Hz$; $arcmin/pix = 1.533$; $\sigma_H = 0.102$; $\sigma_V = 0.085$; $\sigma_{p1x} = 0.145$; $\sigma_{p1y} = 0.062$; $\sigma_{p4x} = 0.164$; $\sigma_{p4y} = 0.083$

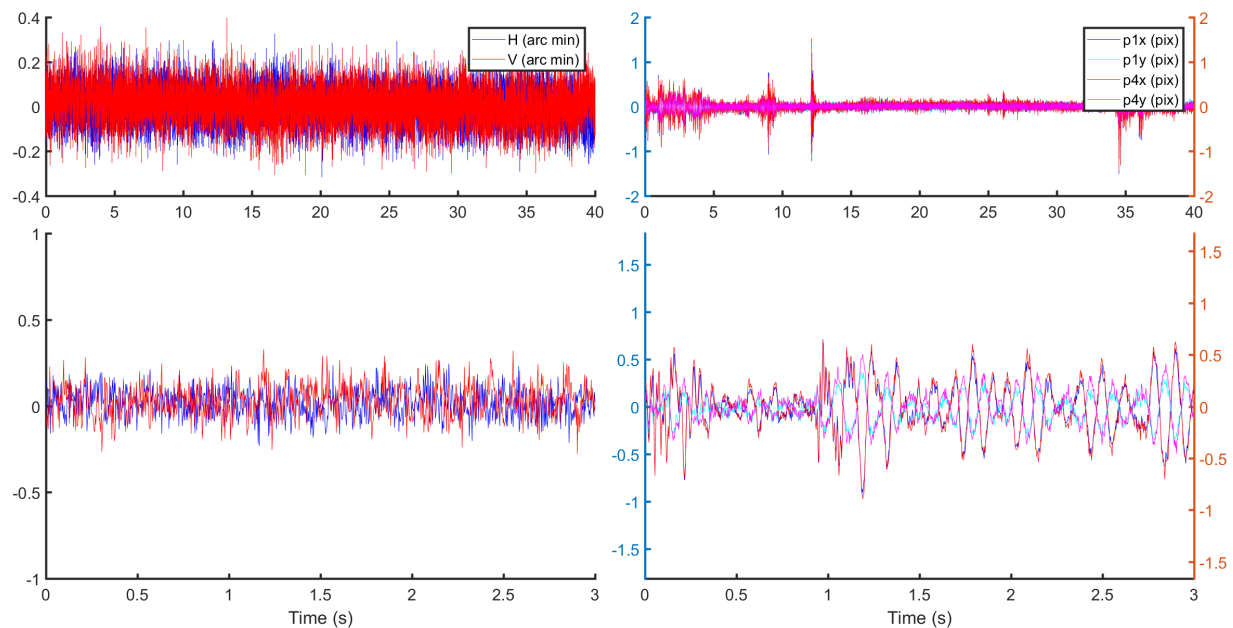


Figure 10: $Amp = 0.000V$; $Freq = 0Hz$; $arcmin/pix = 1.551$; $\sigma_H = 0.081$; $\sigma_V = 0.089$; $\sigma_{p1x} = 0.132$; $\sigma_{p1y} = 0.070$; $\sigma_{p4x} = 0.137$; $\sigma_{p4y} = 0.078$

	arcmin/Pix	std.x	std.y	std.p1x	std.p1y	std.p4x	std.p4y
0.050v	1.5655	0.0862	0.0542	0.1077	0.0465	0.1188	0.0610
0.065v	1.6125	0.0885	0.0535	0.0905	0.0386	0.1075	0.0467
0.100v	1.6146	0.0893	0.0534	0.0582	0.0287	0.0699	0.0274
0.500v	1.5652	0.0936	0.0868	0.1100	0.0536	0.1213	0.0471
1.000v	1.5506	0.0897	0.1224	0.3689	0.1901	0.4758	0.2426
1.500v	1.5662	0.1615	0.1096	0.2969	0.0826	0.3428	0.1380
2.000v	1.5828	0.4124	0.1454	0.2898	0.0764	0.2180	0.0754
2.500v	1.5591	0.1019	0.1070	0.2494	0.1210	0.2716	0.1254
5.000v	1.5327	0.1025	0.0846	0.1449	0.0615	0.1643	0.0830
v	1.5506	0.0814	0.0893	0.1316	0.0698	0.1370	0.0783

Figure 11: Standard deviations.