CHAPTER 1

Sensor Properties

In Table 1.1 on the following page the thermal sensor was exposed to the night sky at a capture rate of 1Hz for 4 minutes, with the sensing results combined to create a set of means and standard deviations to indicate the pixels at “rest”.

14.95 0.51	14.33 0.27	12.34 0.27	8.77 0.33	8.15 0.31	10.84 0.38	9.02 0.26	7.79 0.37	6.67 0.27	9.63 0.29	9.29 0.26	8.24 0.27	9.84 0.25	14.28 0.33	14.92 0.3	13.16 0.25
14.54 0.34	15.62 0.31	12.73 0.23	11.51 0.27	11.79 0.26	11.47 0.27	11.43 0.29	9.02 0.35	8.57 0.23	11.15 0.23	10.64 0.22	10.3 0.24	12.09 0.22	14.49 0.26	14.88 0.31	14.71 0.36
18.25 0.45	16.62 0.31	14.15 0.24	11.97 0.34	13.11 0.3	12.64 0.22	10.66 0.23	9.15 0.24	9.58 0.28	11.95 0.28	11.22 0.24	11.52 0.36	11.11 0.23	12.59 0.25	14.44 0.31	13.35 0.28
16.02 0.28	16.81 0.36	15.0 0.25	11.53 0.28	10.18 0.29	12.2 0.25	11.78 0.29	8.36 0.31	8.15 0.33	10.36 0.32	10.74 0.31	8.25 0.36	9.99 0.35	12.42 0.38	11.39 0.4	11.06 0.34

Table 1.1: Mean and standard deviations for each pixel at rest

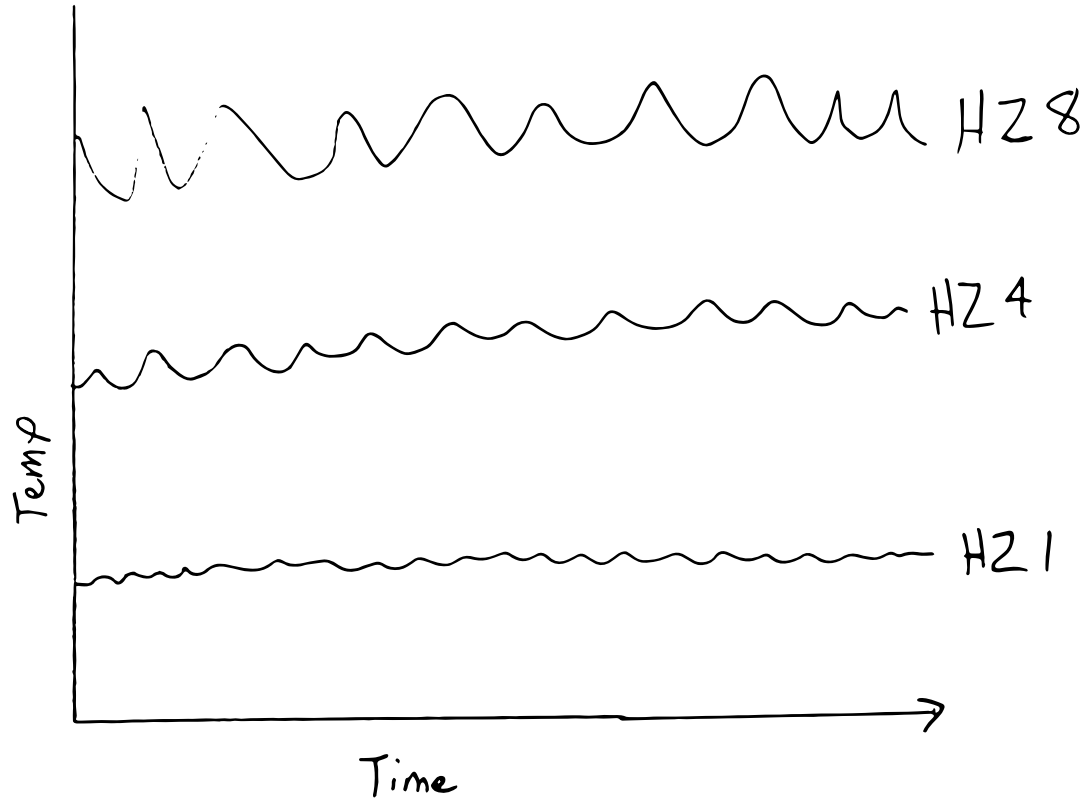

Figure 1.1: Comparison of noise levels at the *Melexis*'s various sampling speeds

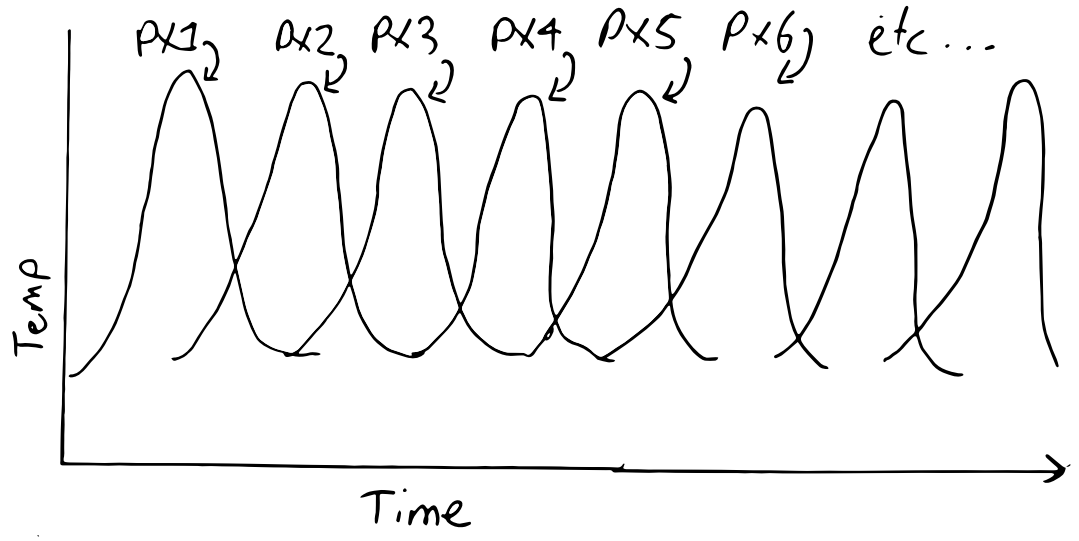

Figure 1.2: Different *Melexis* pixel temperature values as hot object moves across row

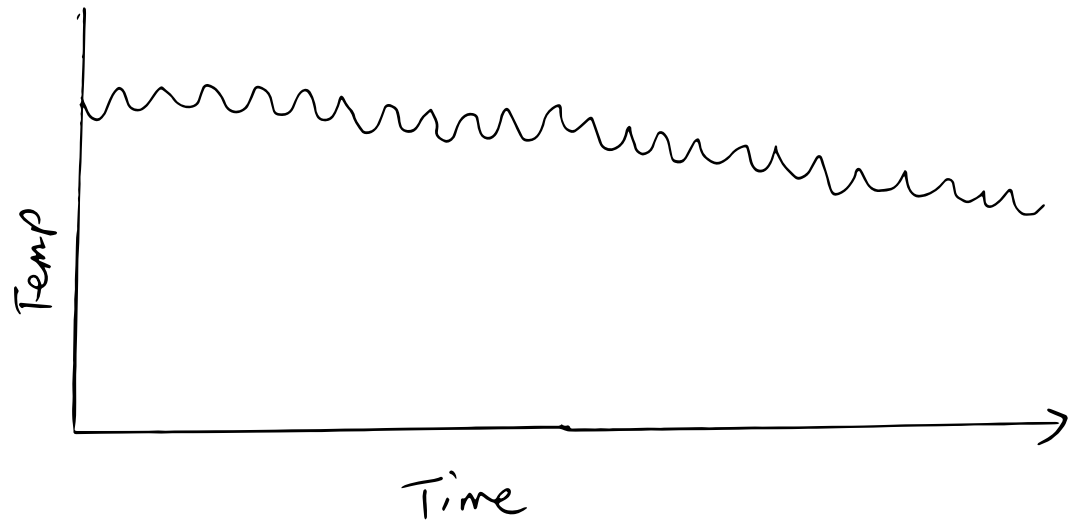

Figure 1.3: Variation in temperature detected for hot object at 1Hz sampling ration

Bibliography