

Chapter 1. Controller Settings

Table 1.1. cs

Field	Value
a	< arduino>
servoPin	D9
s	< arduinoio.Servo>
sensorPin1	A0
sensorPin2	A1
interp	interpTable: [11×3 table]
kp	0.0020
kd	0.0021
nTrials	50
interv	160
n	2
n_startup	10
weightNew	0.3180
weightOld	0.6820
MaxInput	0.0500
balanced	0.4600
max	0.5100
min	0.4100
tolerance	0.0048
posTol	2
velTol	7
dataPoints	8

Chapter 2. Diagnostic Variables

Table 2.1. diagnostics

Field	Value
trialData	diagnostics.trialData [2]
settings	diagnostics.settings [2]
efficiency	diagnostics.efficiency [2]

Table 2.2. diagnostics [2].trialData

Field	Value
AvgOvershoot	-3.0934
overshoot_time	2.0727
PO	14.7306
AvgRebound	2.2530
rebound_time	3.2612
P_rebound	-72.8327
inactiveControlPercentage	0.2525
meanLastPosition	0.2116
SDLastPosition	2.4334

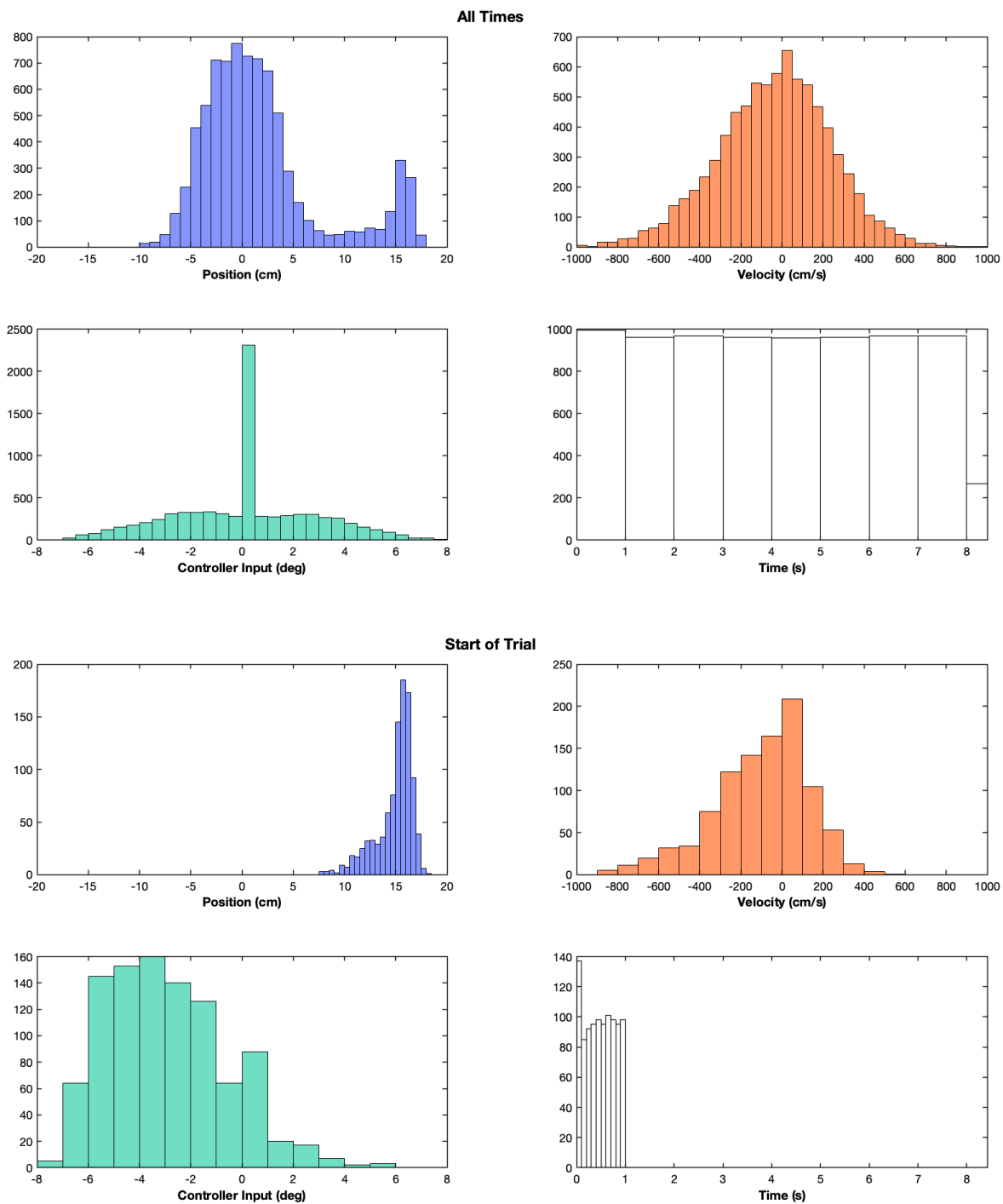
Table 2.3. diagnostics [2].settings

Field	Value
kp	0.0020
kd	0.0021
intervals	160
n_sample	2
maxInput	0.5100
minInput	0.4100
HistWeightFactor	0.6820
nTrials	50

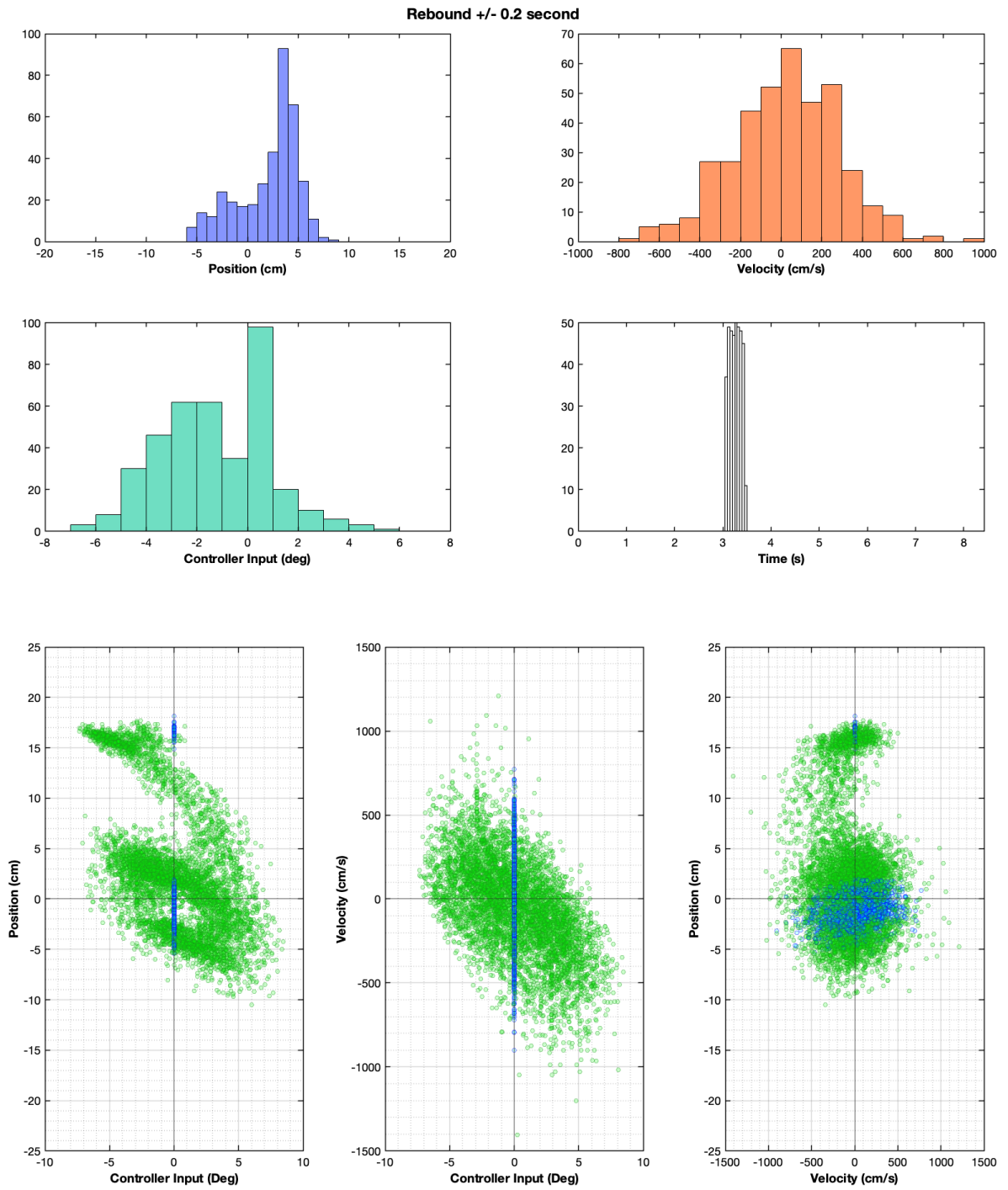
Table 2.4. diagnostics [2].efficiency

Field	Value
AvgLoopTime	0.0516
AvgLoopFrequency	19.3833

Chapter 3. Figures

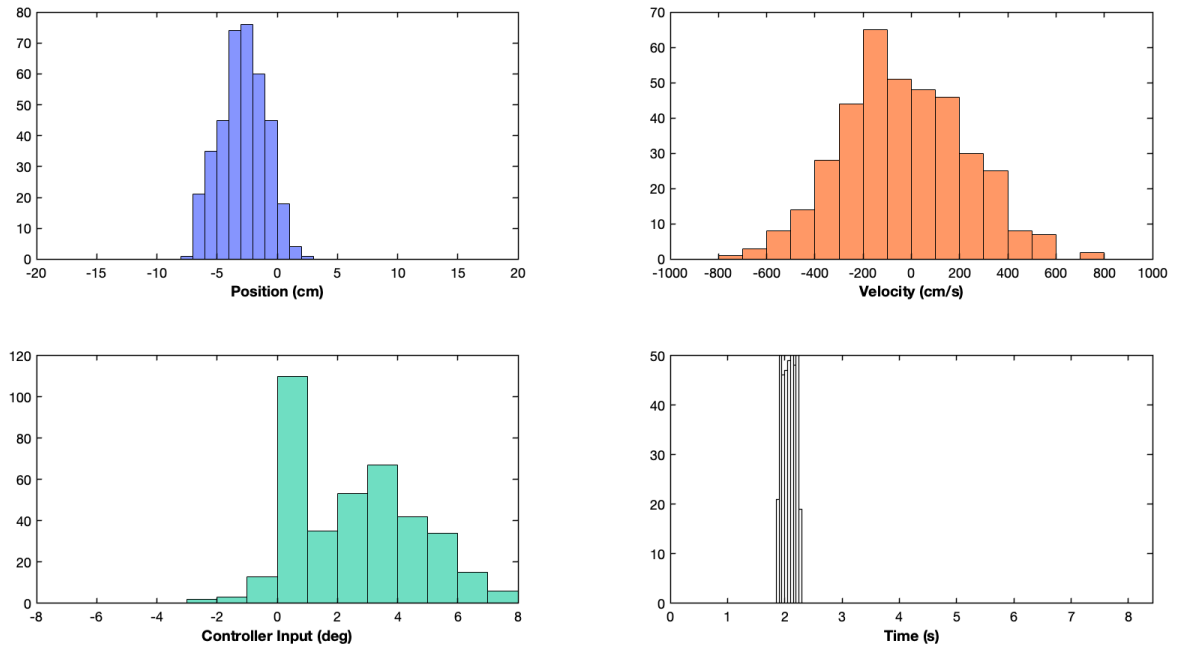


Figures

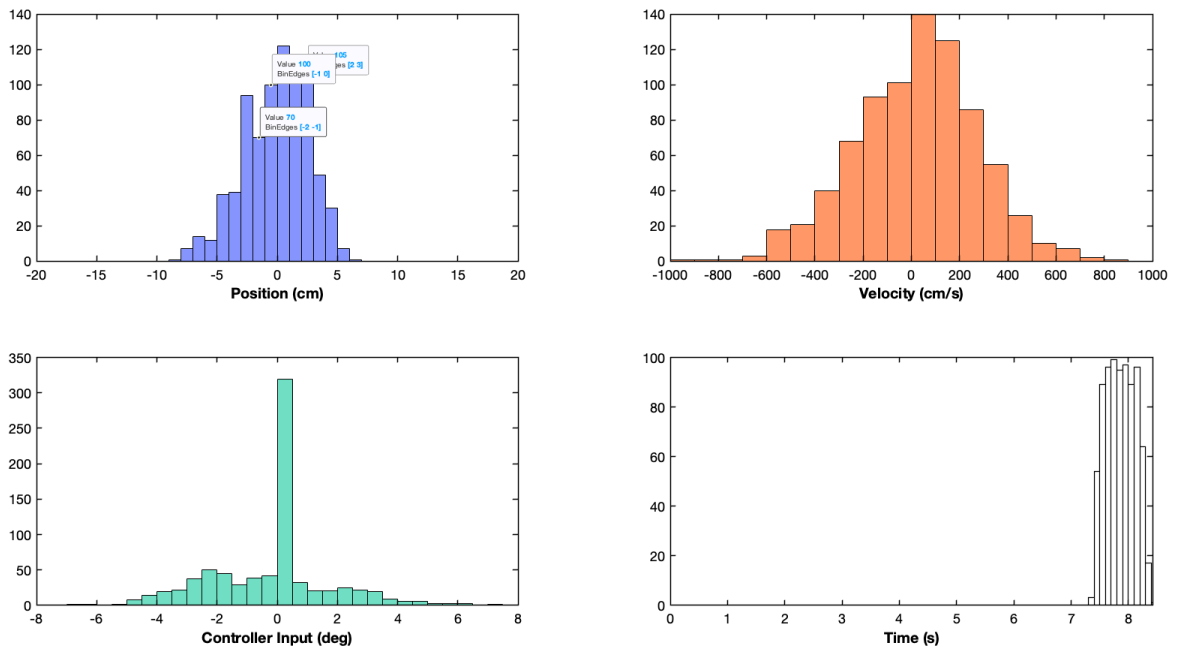


Figures

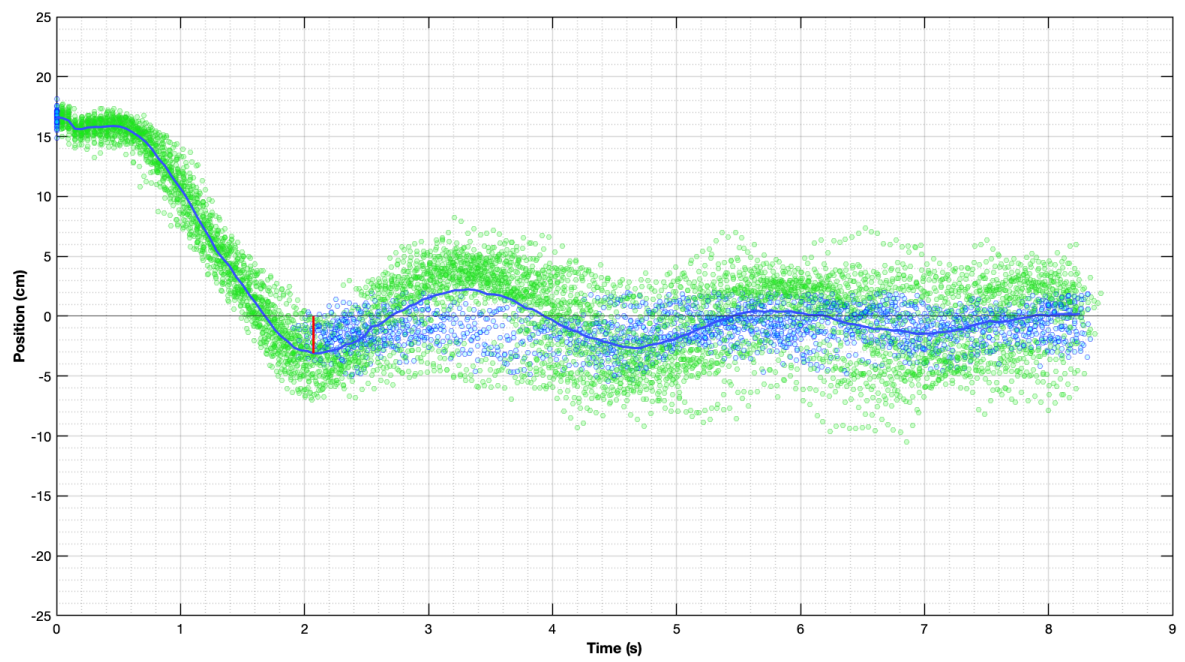
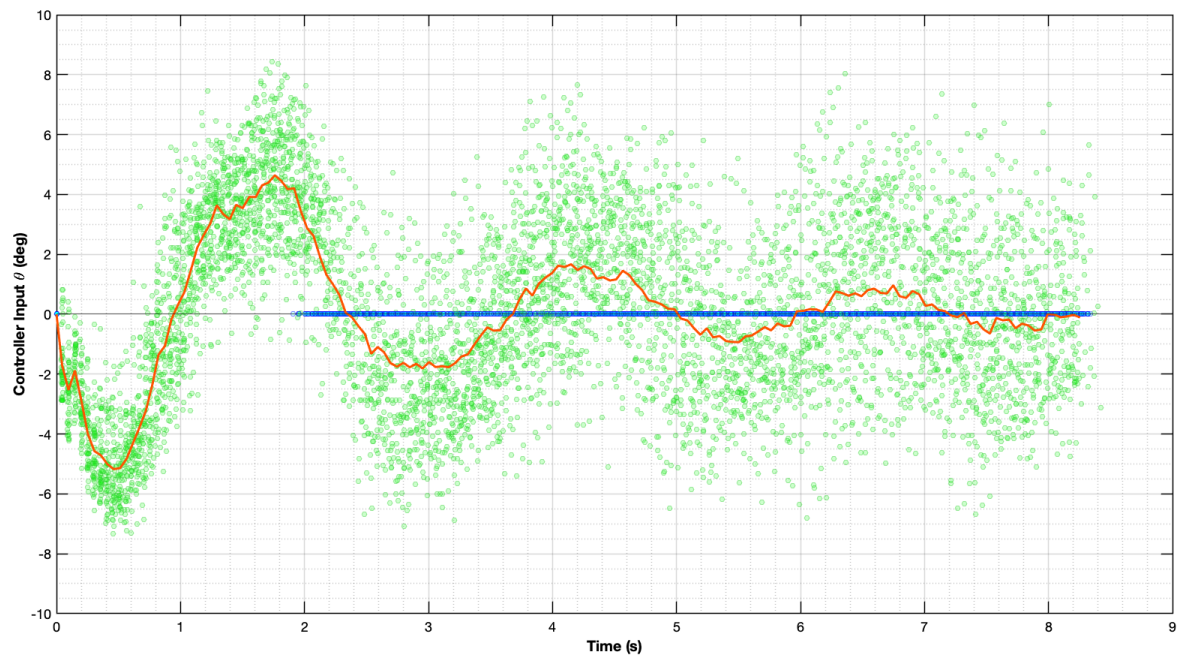
Overshoot +/- 0.2 second



End of Trial



Figures



Figures

