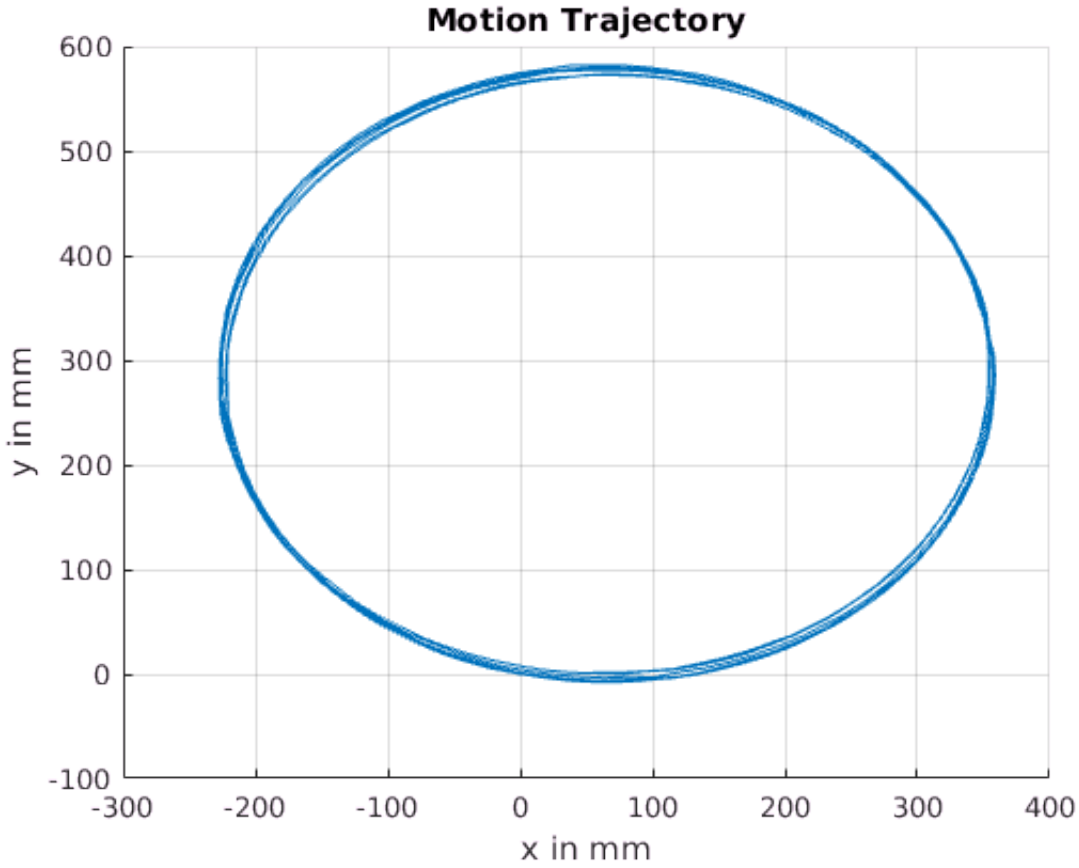
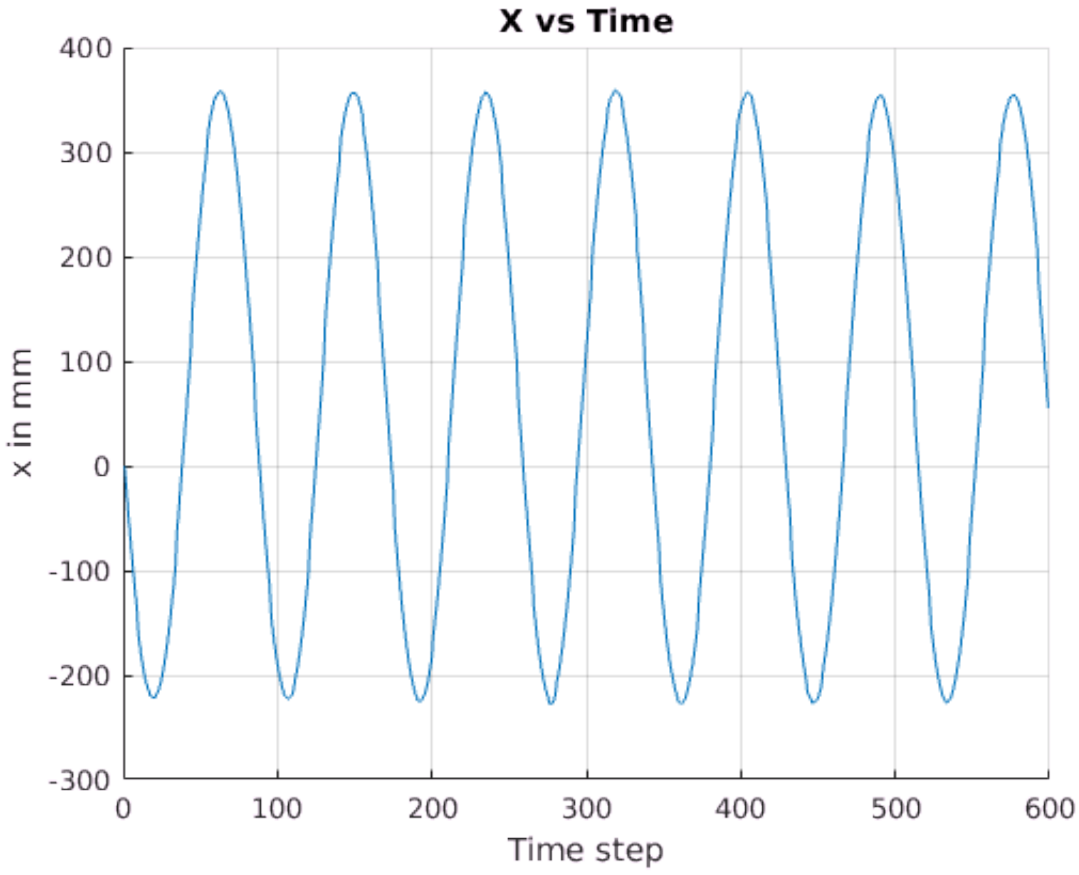
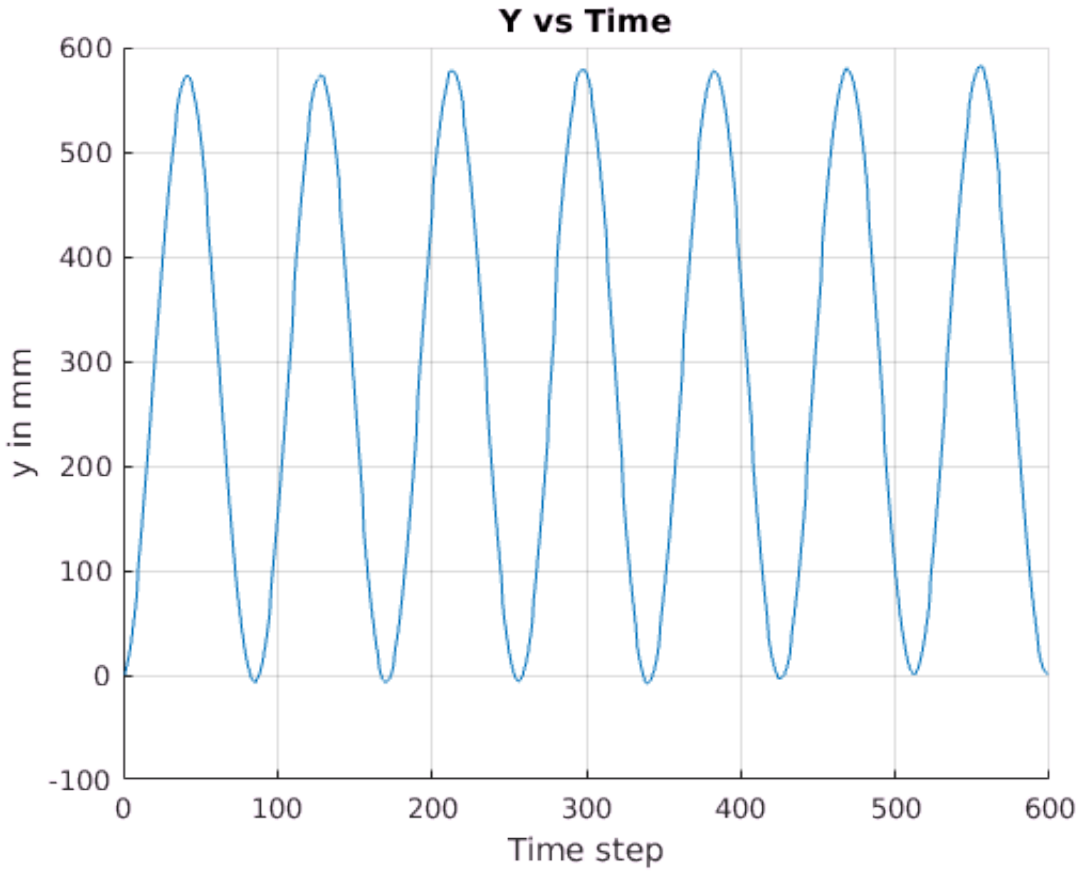
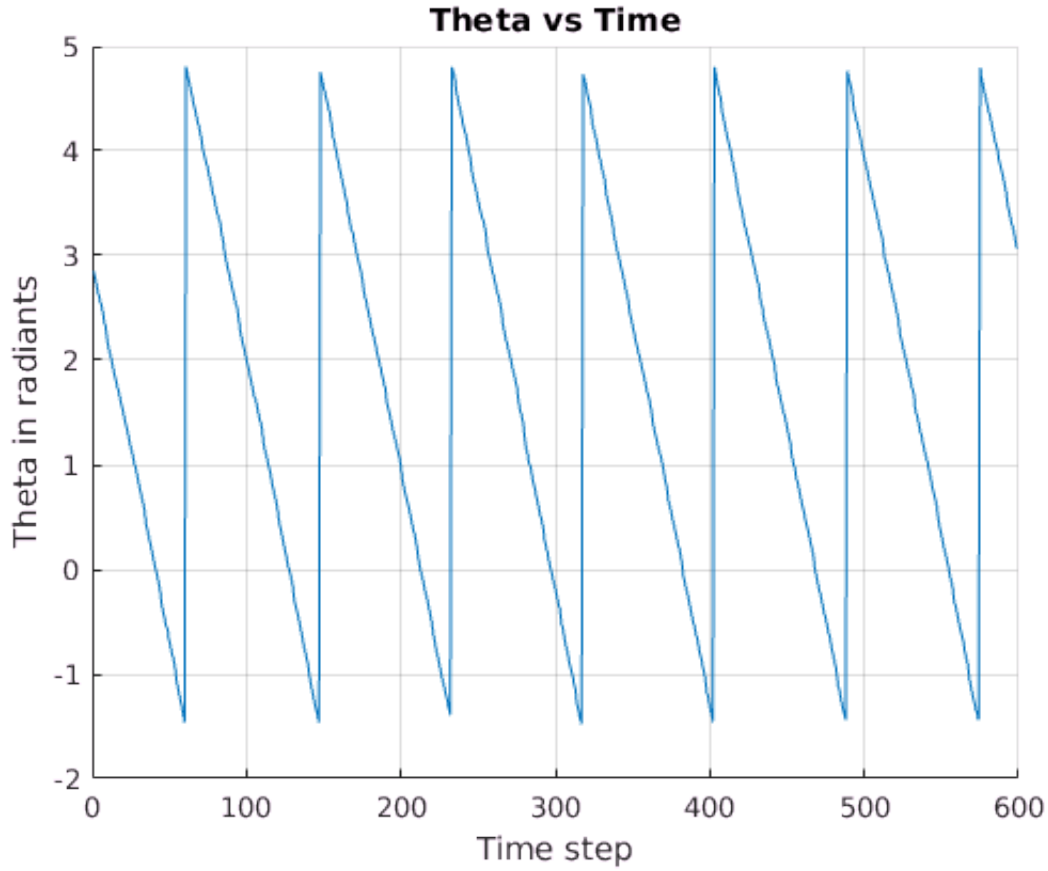
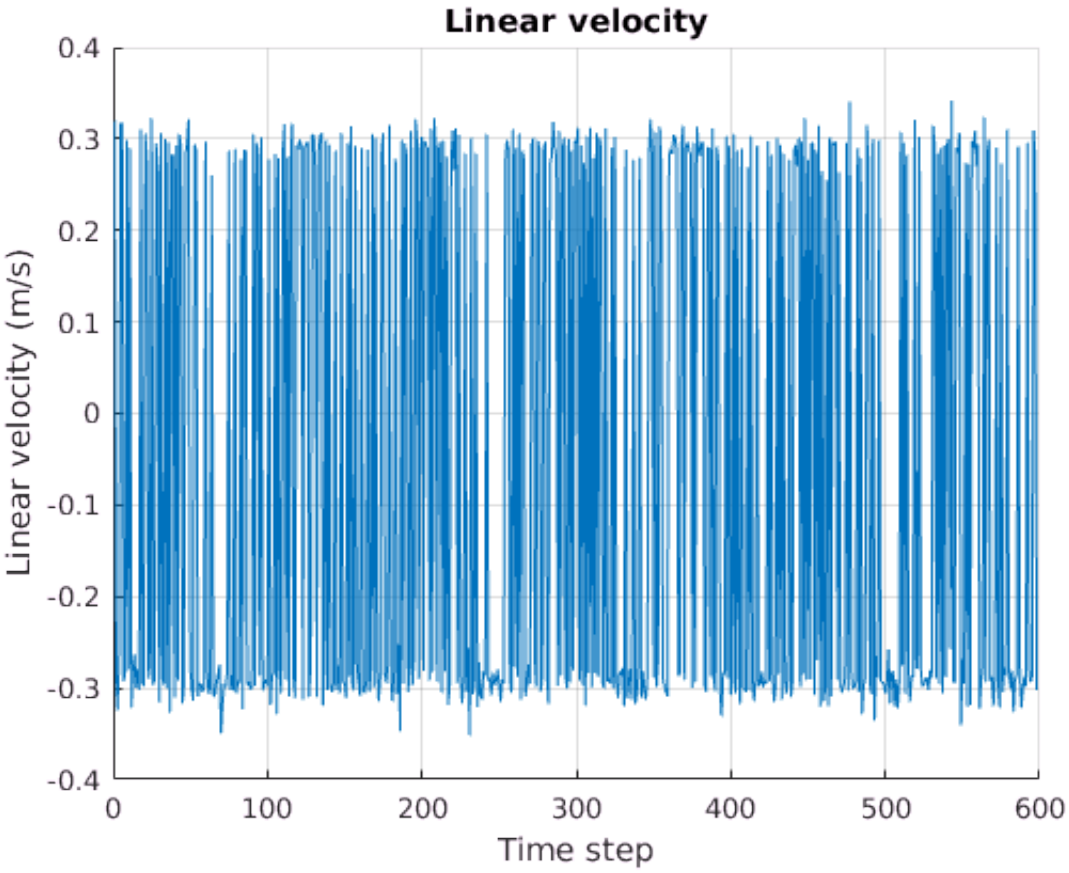
```
data1 = analyzeMotionLog('./logs1/right.log');
```

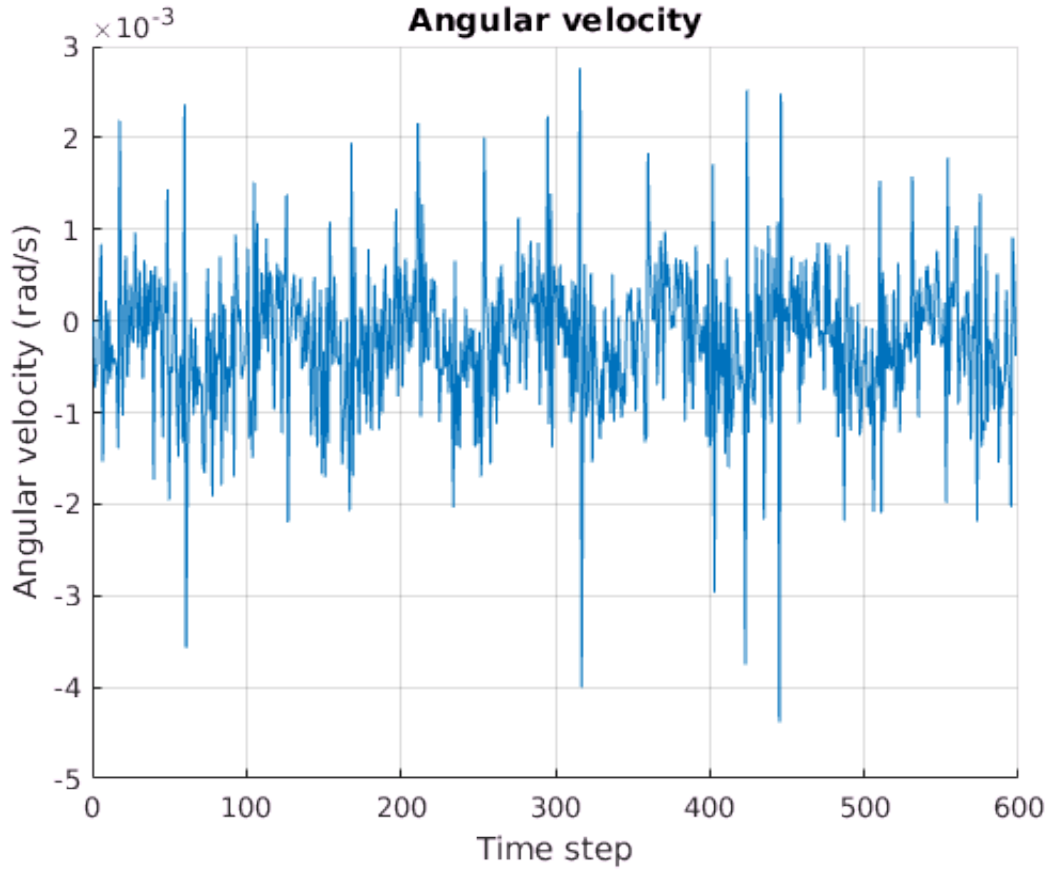


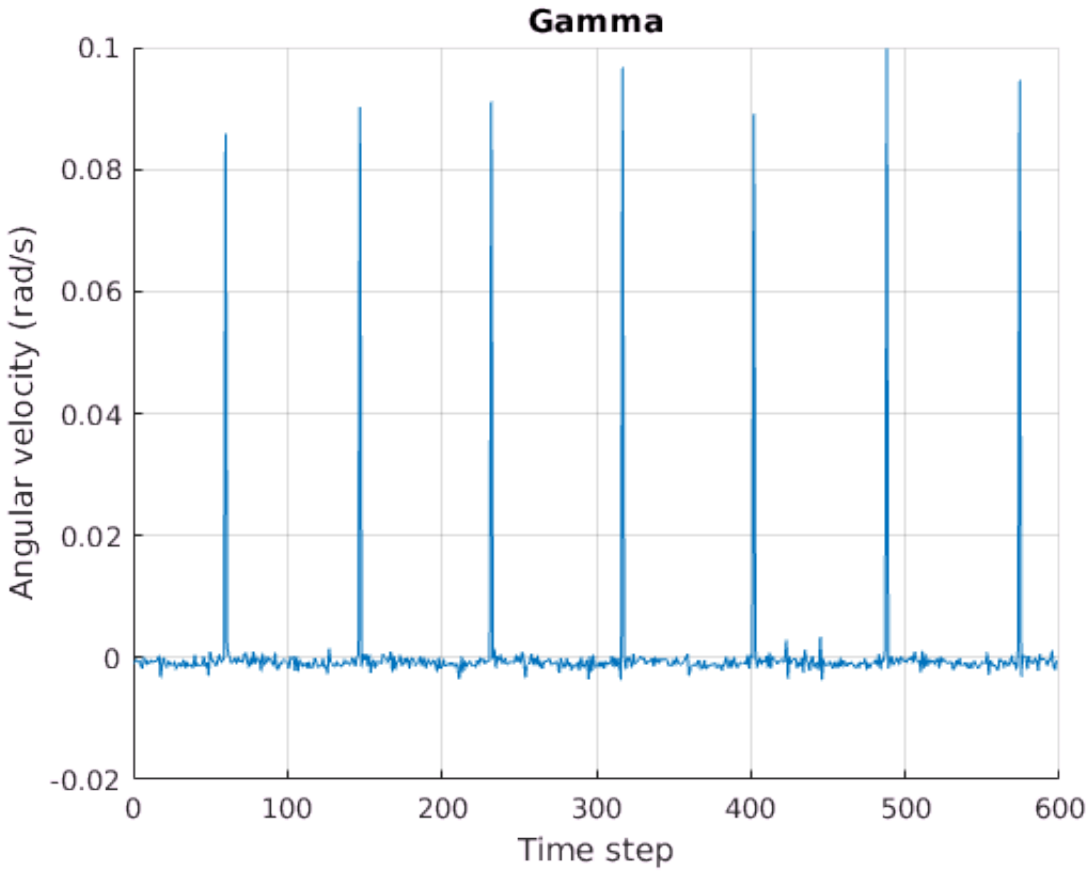



Y vs Time
y in mm
Time step
600
500
400
300
200
100
0
-100
0
100
200
300
400
500
600

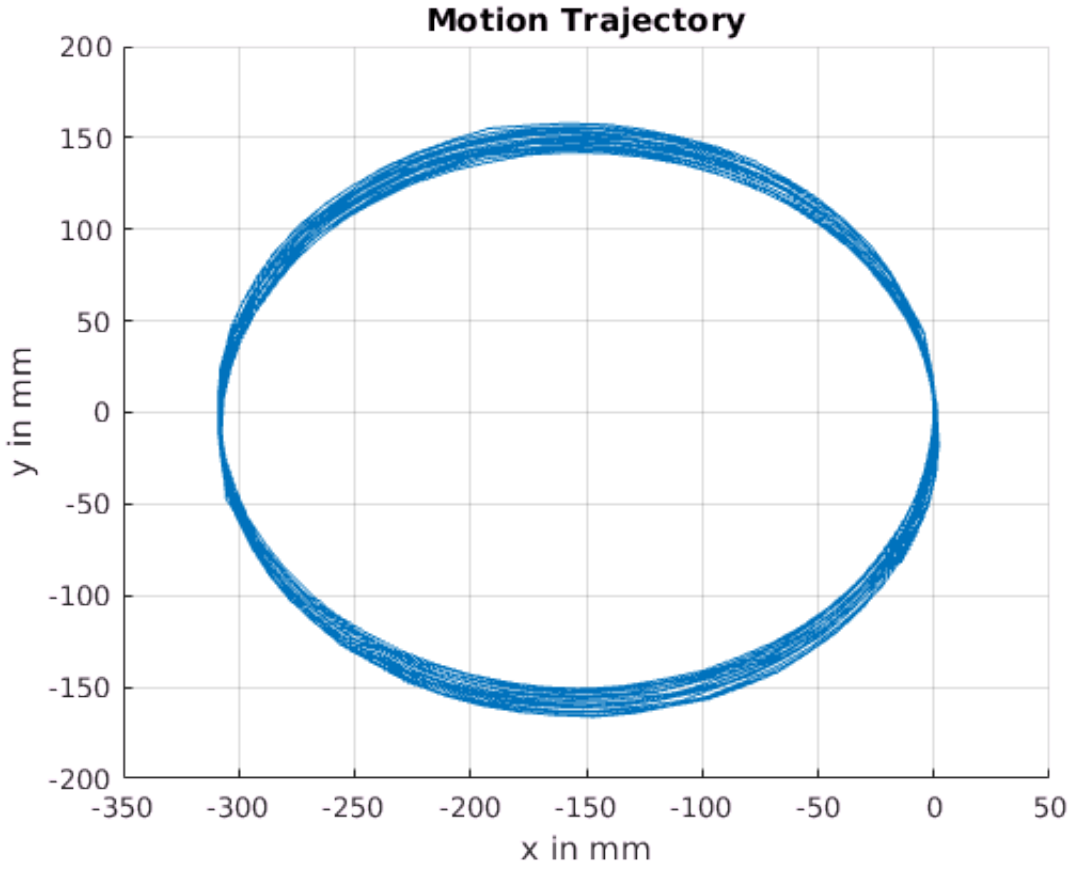

Theta vs Time
Theta in radiants
Time step
5
4
3
2
1
0
-1
-2
0
100
200
300
400
500
600

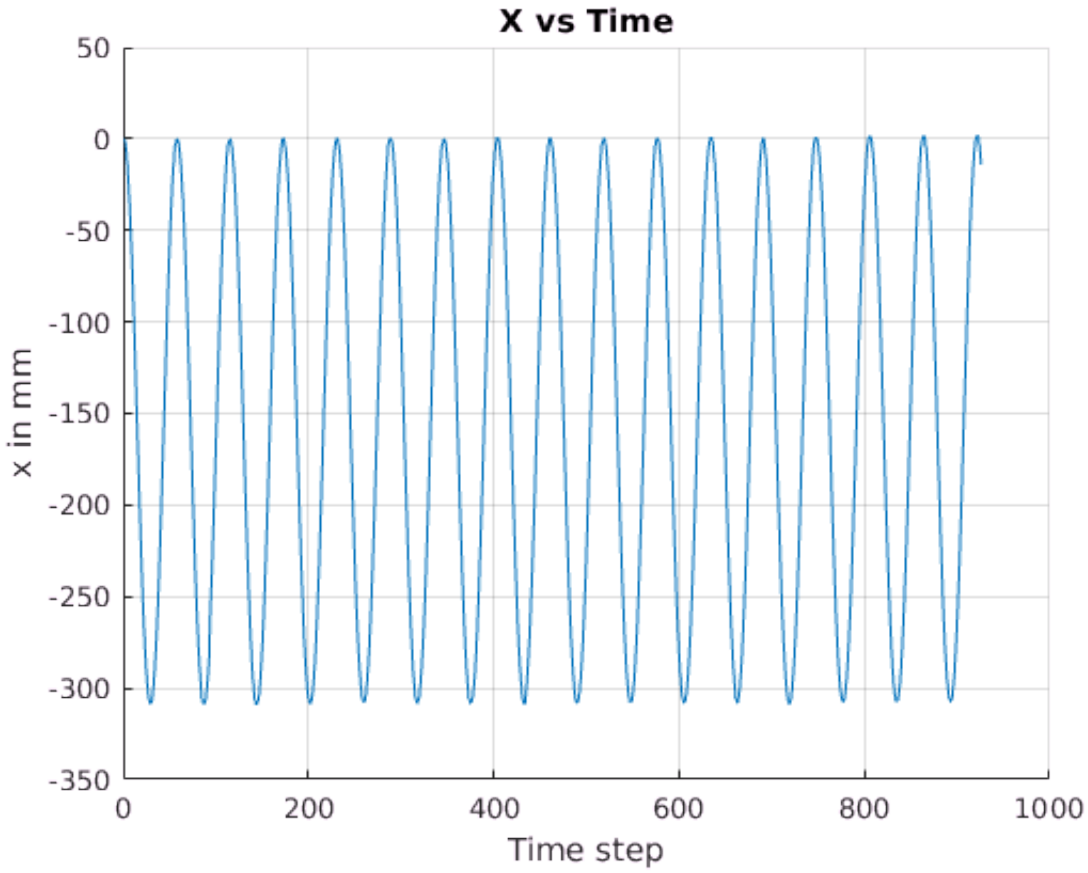

Linear velocity
Linear velocity (m/s)
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-0.4
0
100
200
300
400
500
600
Time step

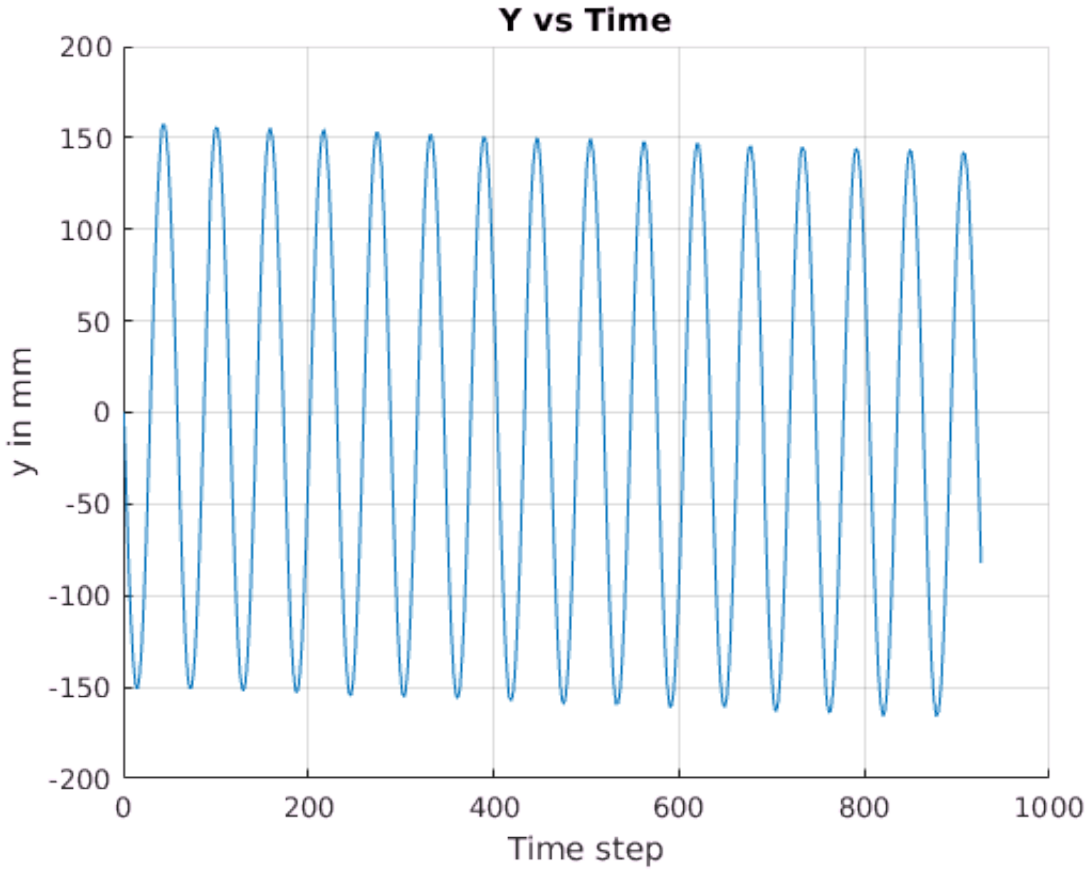

Angular velocity
×10^-3
Angular velocity (rad/s)
3
2
1
0
-1
-2
-3
-4
-5
0
100
200
300
400
500
600
Time step

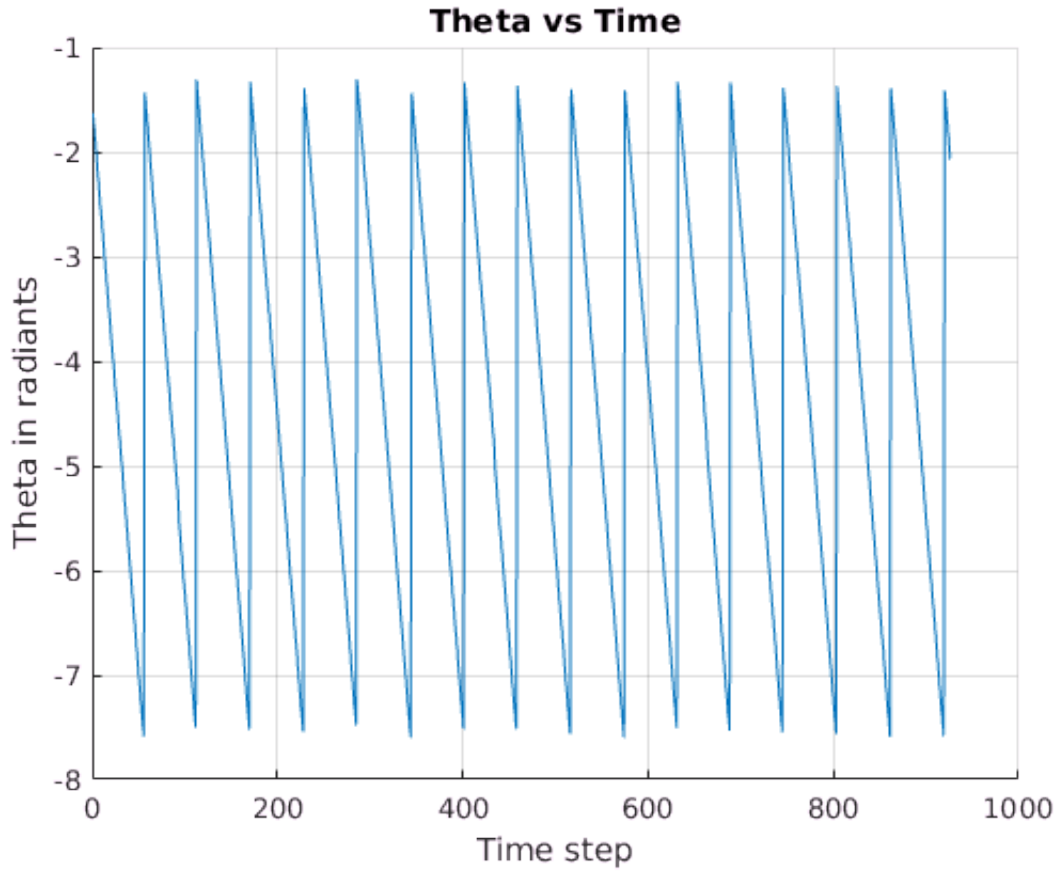


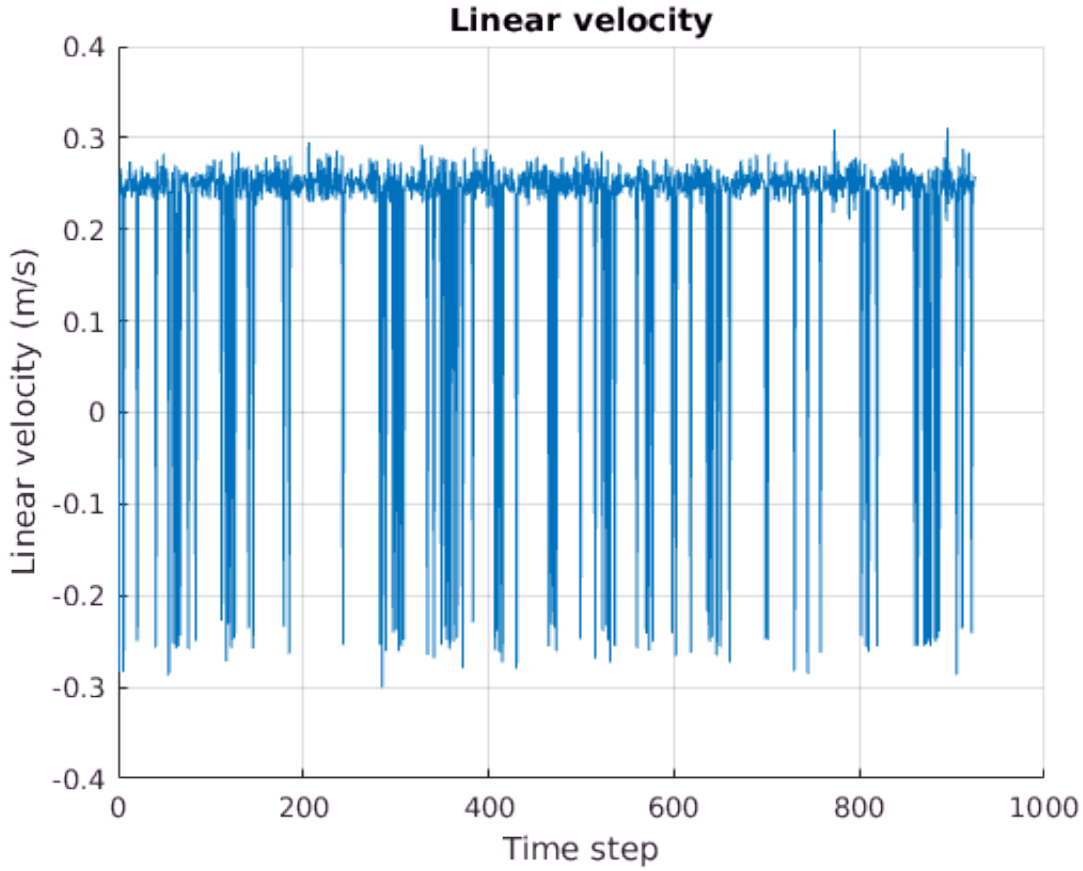

```
data2 = analyzeMotionLog('./logs2/right.log');
```

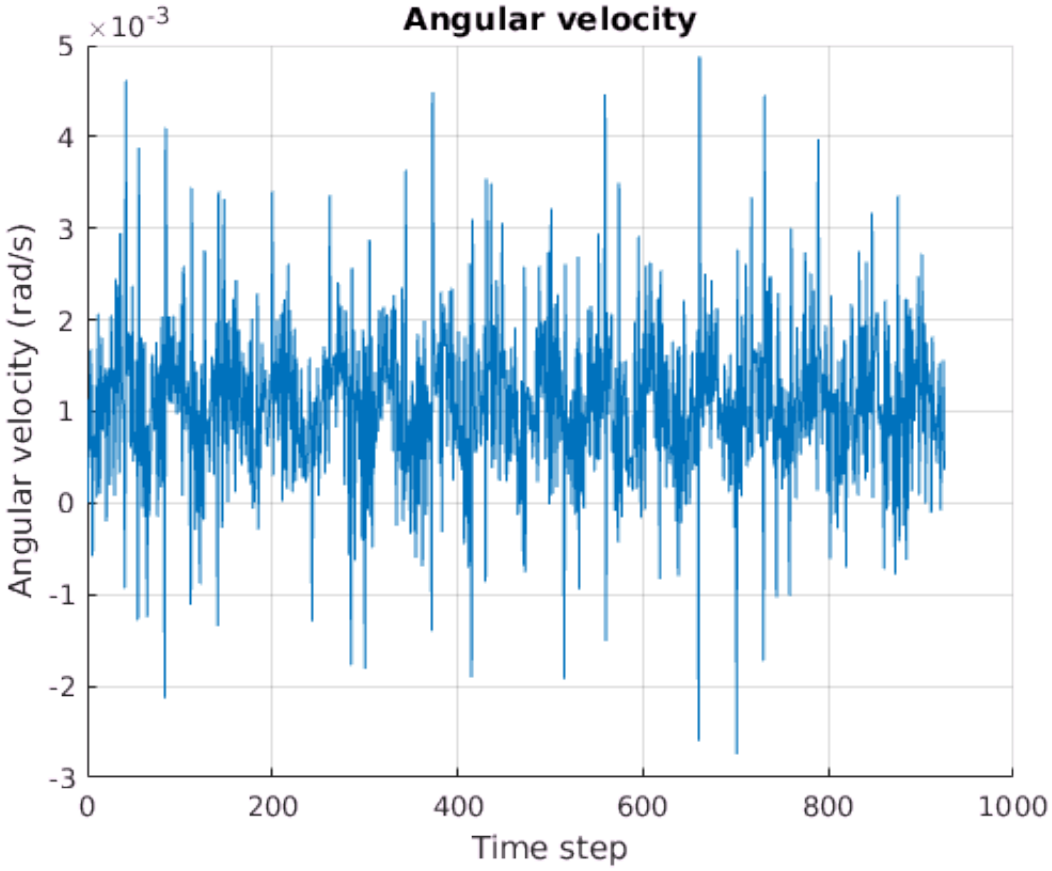


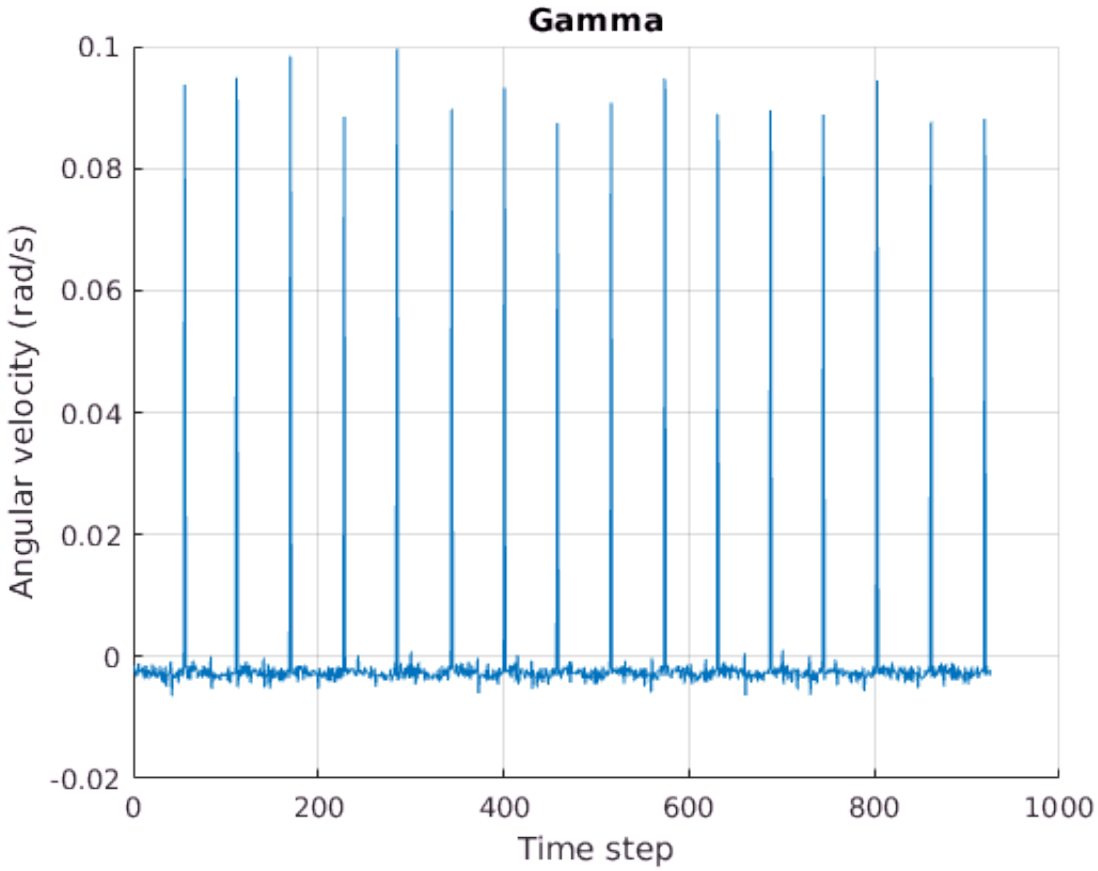

X vs Time
x in mm
Time step
50
0
-50
-100
-150
-200
-250
-300
-350
0
200
400
600
800
1000


Y vs Time
y in mm
Time step
200
150
100
50
0
-50
-100
-150
-200
0
200
400
600
800
1000

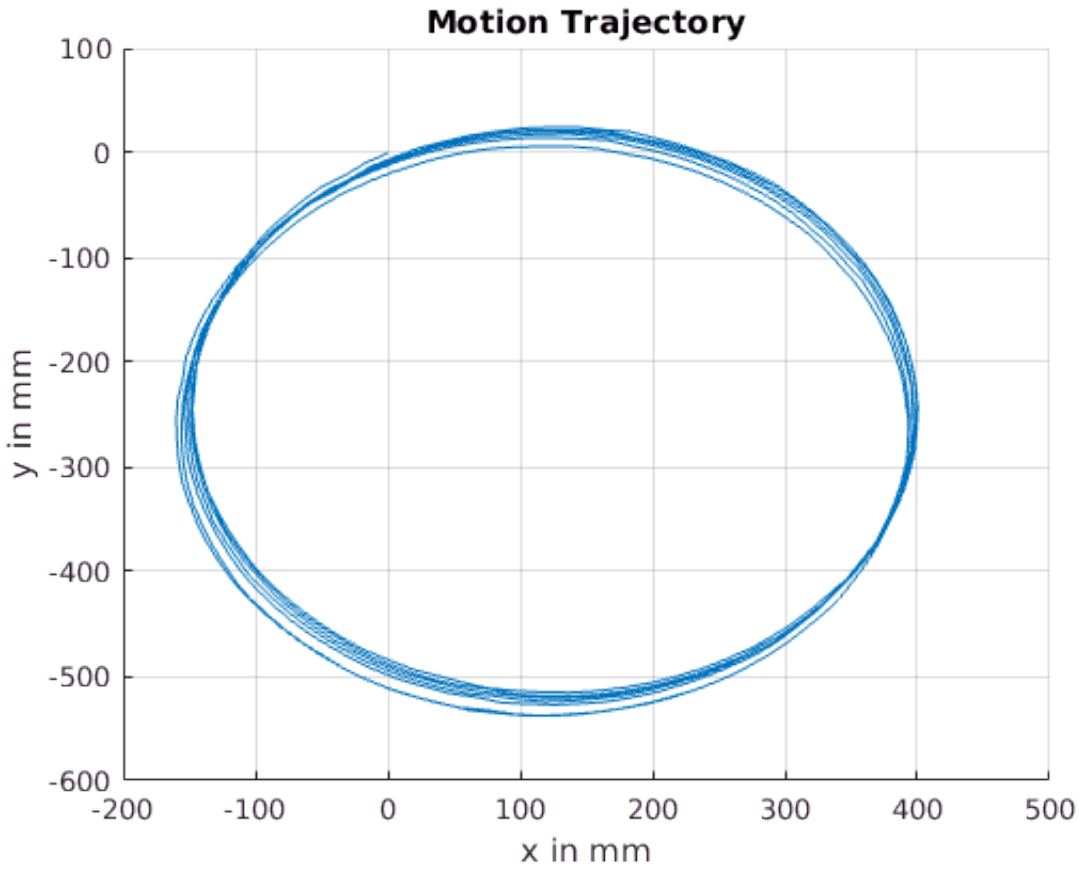

Theta vs Time
Theta in radiants
-1
-2
-3
-4
-5
-6
-7
-8
0
200
400
600
800
1000
Time step

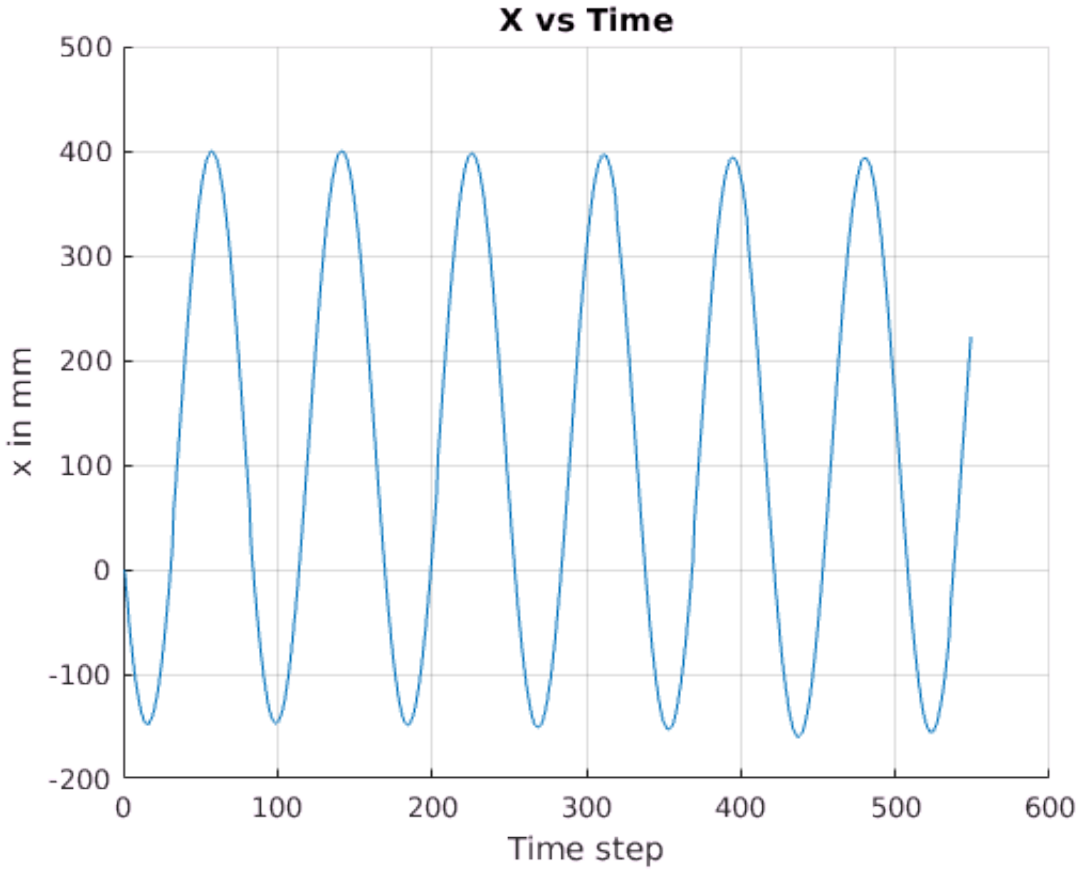

Linear velocity
Linear velocity (m/s)
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-0.4
0
200
400
600
800
1000
Time step

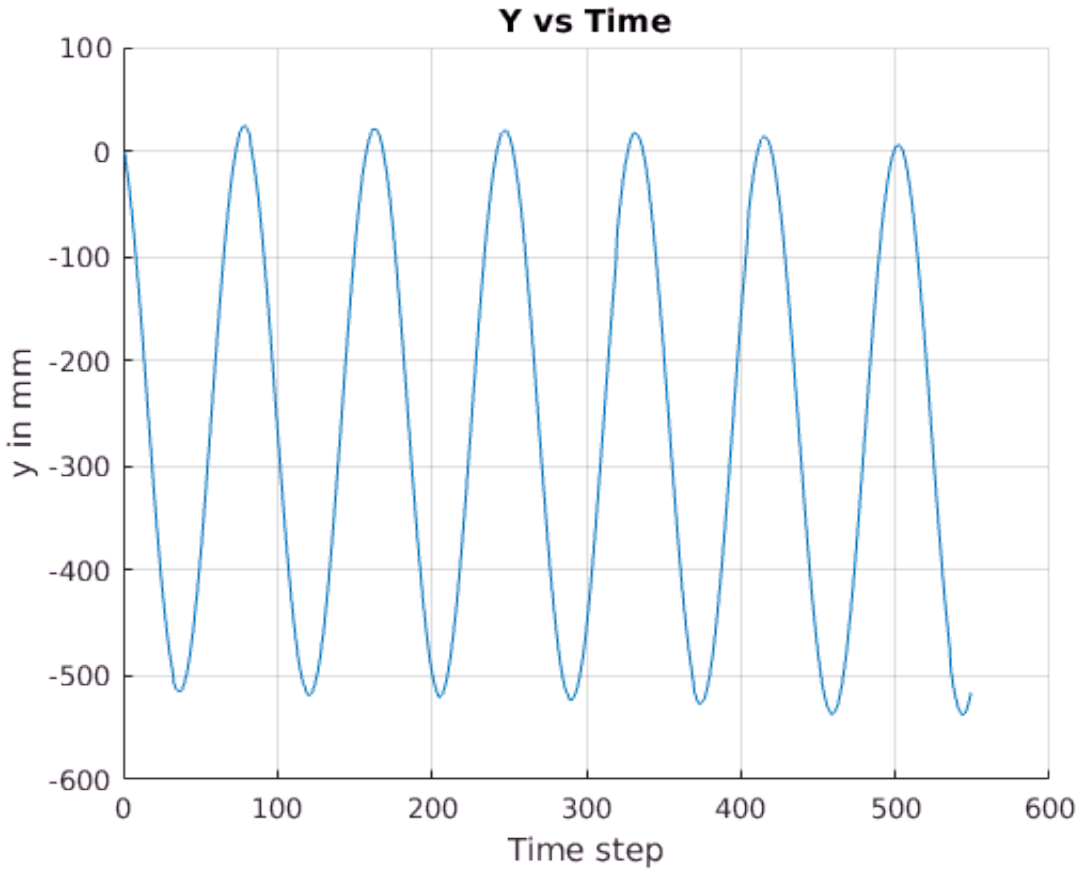


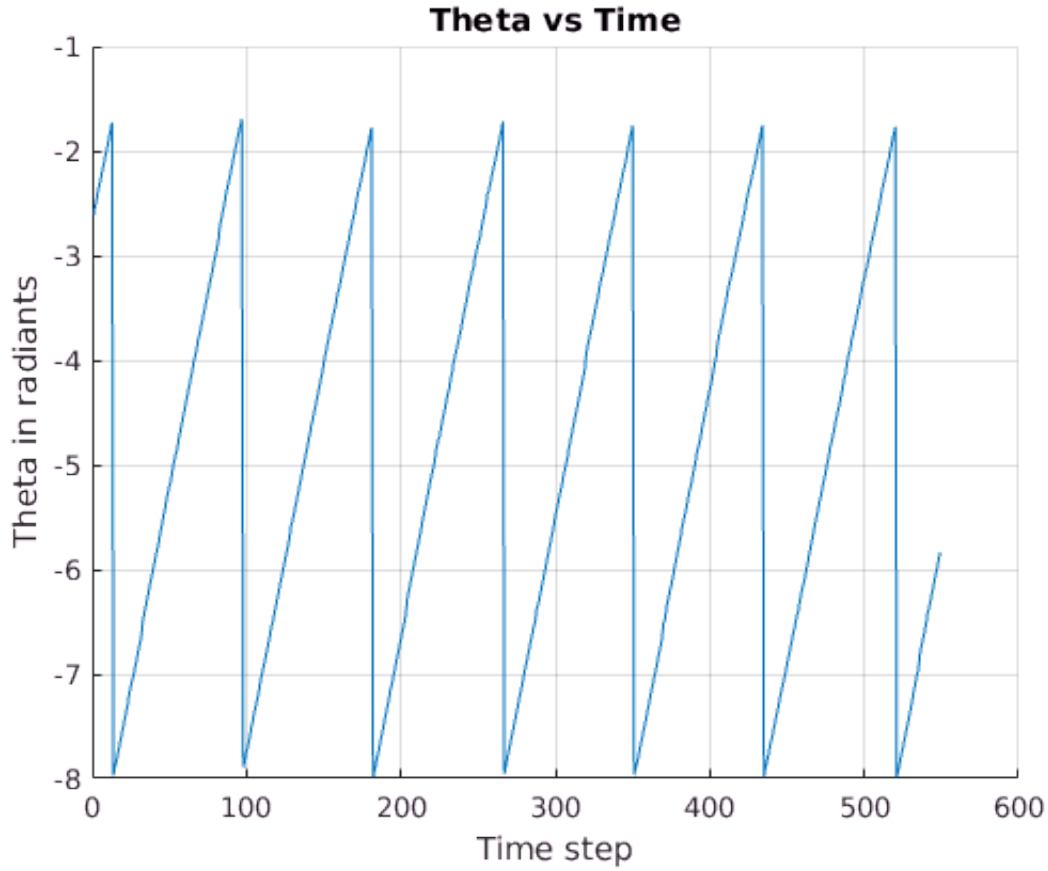


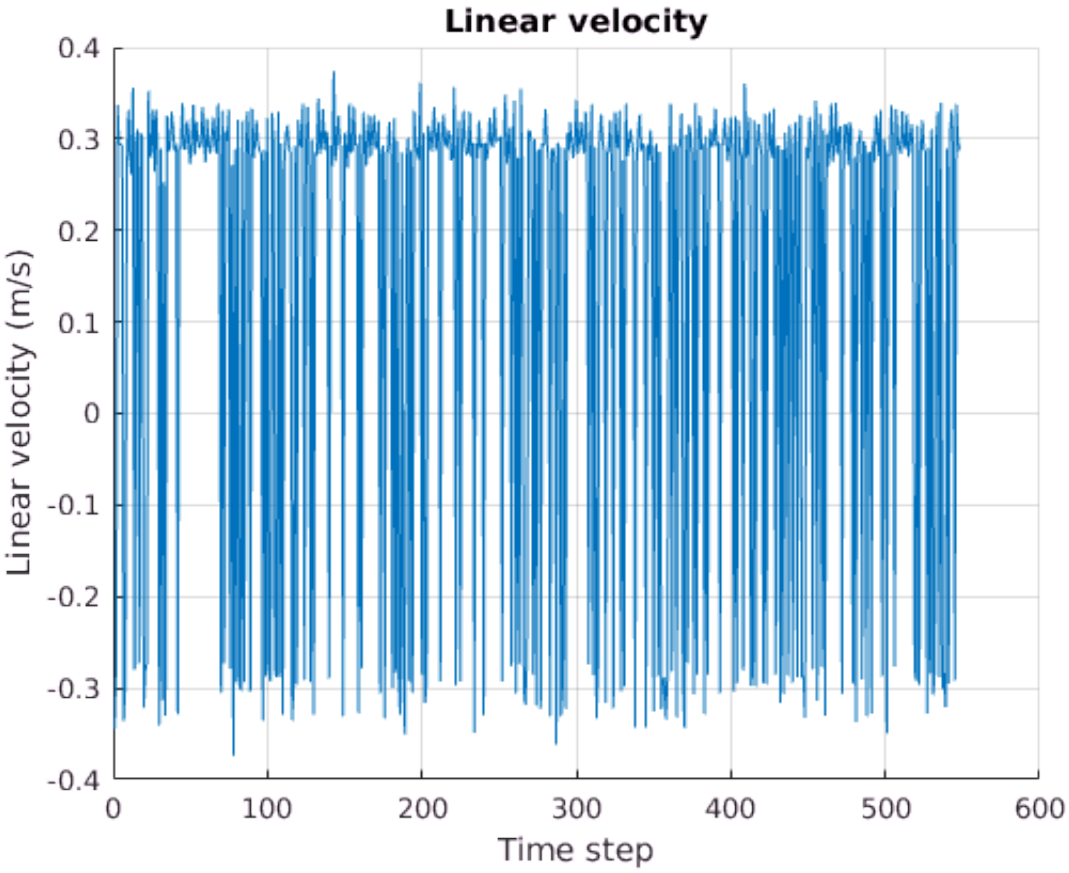

```
data3 = analyzeMotionLog('./logs1/left.log');
```

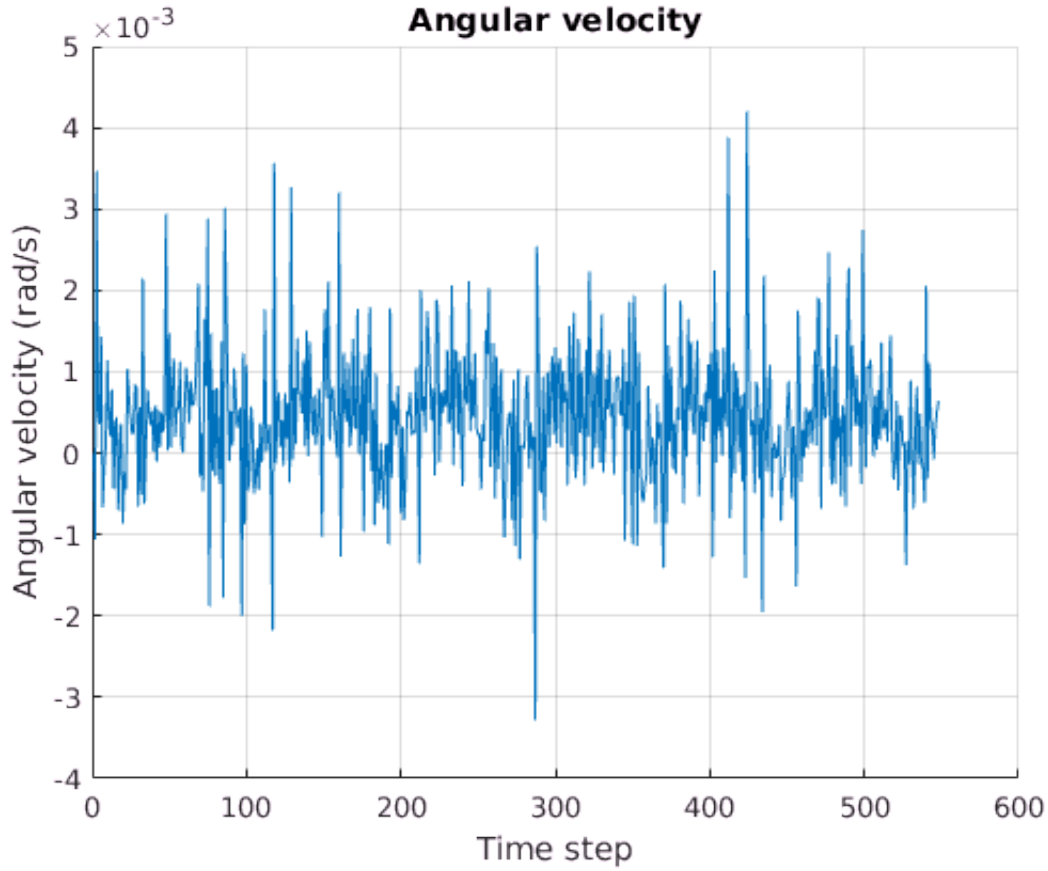

Motion Trajectory
100
0
-100
-200
-300
-400
-500
-600
y in mm
-200
-100
0
100
200
300
400
500
x in mm

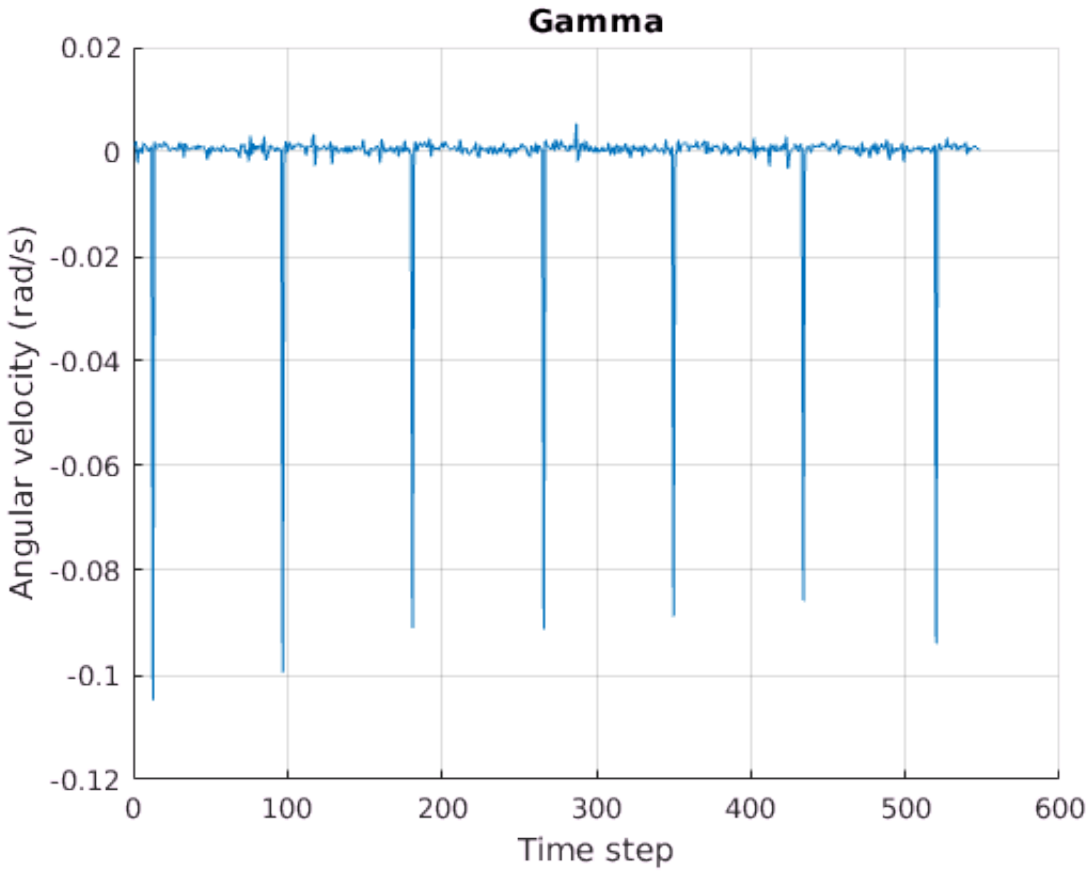

X vs Time
500
400
300
200
100
0
-100
-200
x in mm
0
100
200
300
400
500
600
Time step


Y vs Time
y in mm
Time step
100
0
-100
-200
-300
-400
-500
-600
0
100
200
300
400
500
600

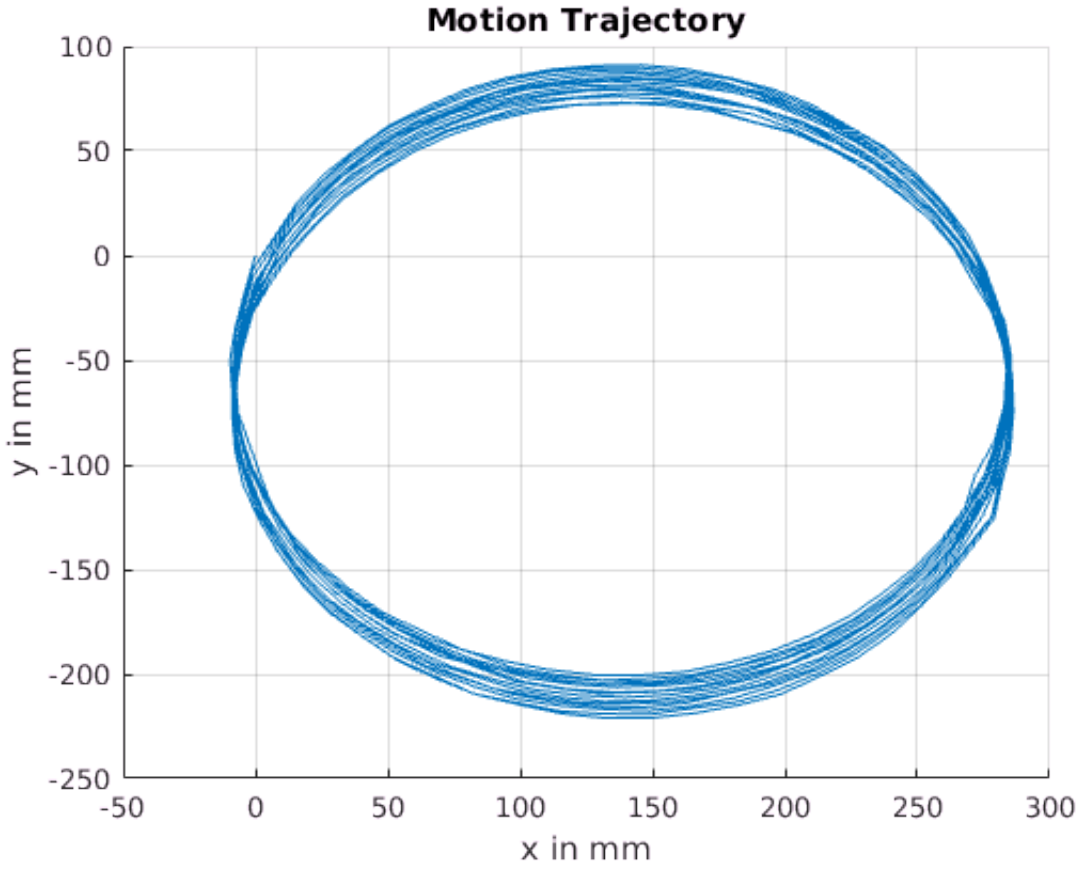

Theta vs Time
Theta in radiants
Time step
-1
-2
-3
-4
-5
-6
-7
-8
0
100
200
300
400
500
600

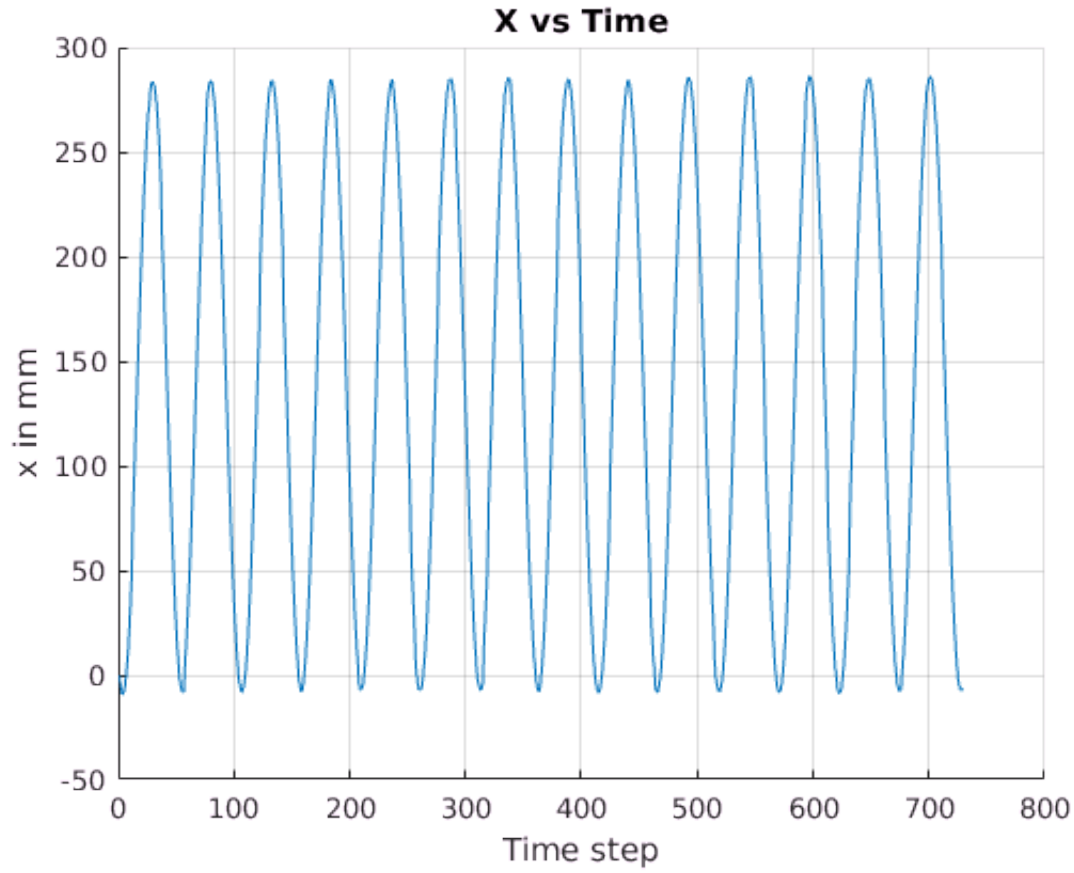

Linear velocity
Linear velocity (m/s)
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
-0.4
0
100
200
300
400
500
600
Time step

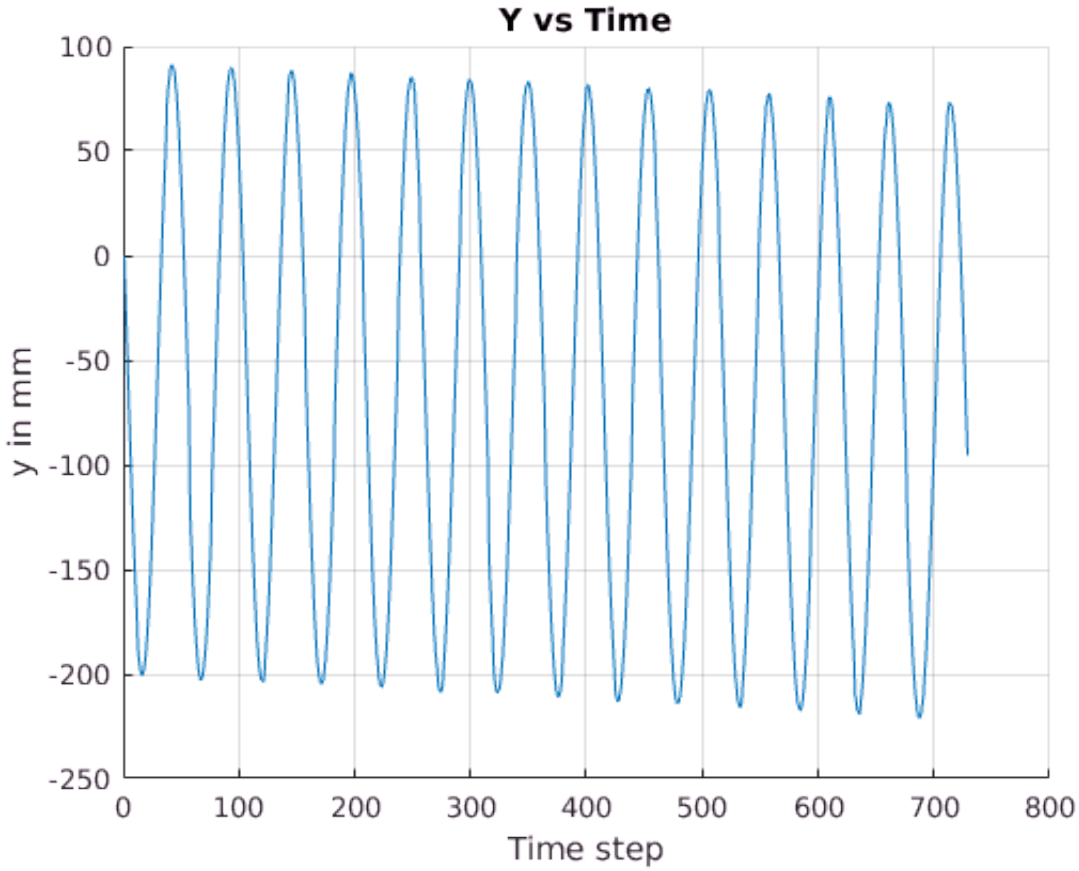

Angular velocity
×10^-3
Angular velocity (rad/s)
5
4
3
2
1
0
-1
-2
-3
-4
0
100
200
300
400
500
600
Time step

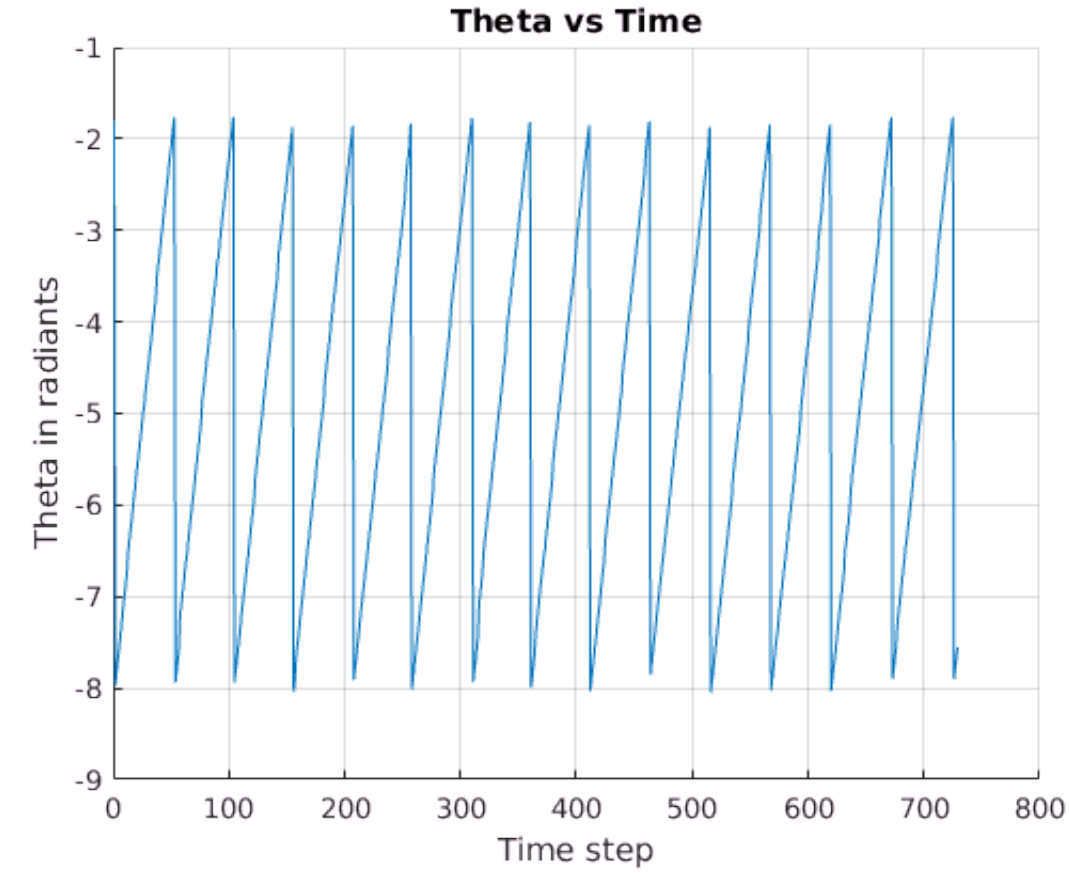


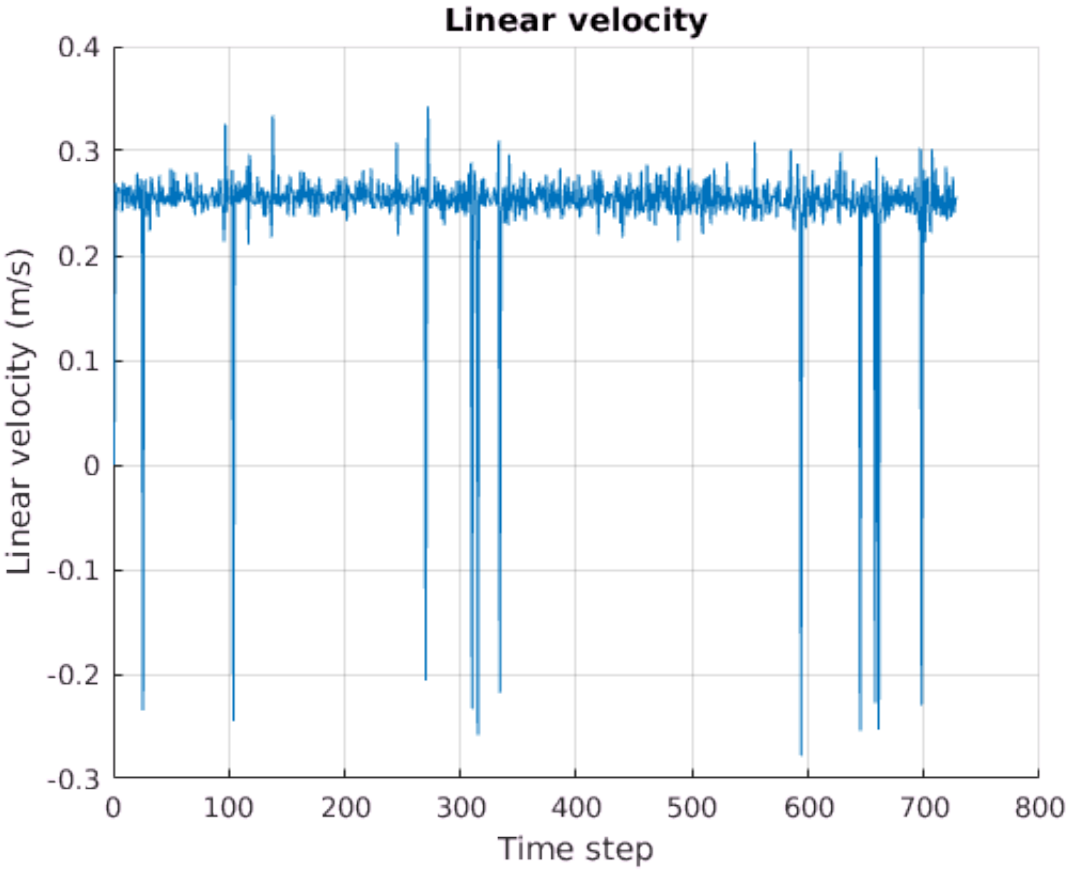

```
data4 = analyzeMotionLog('./logs2/left.log');
```

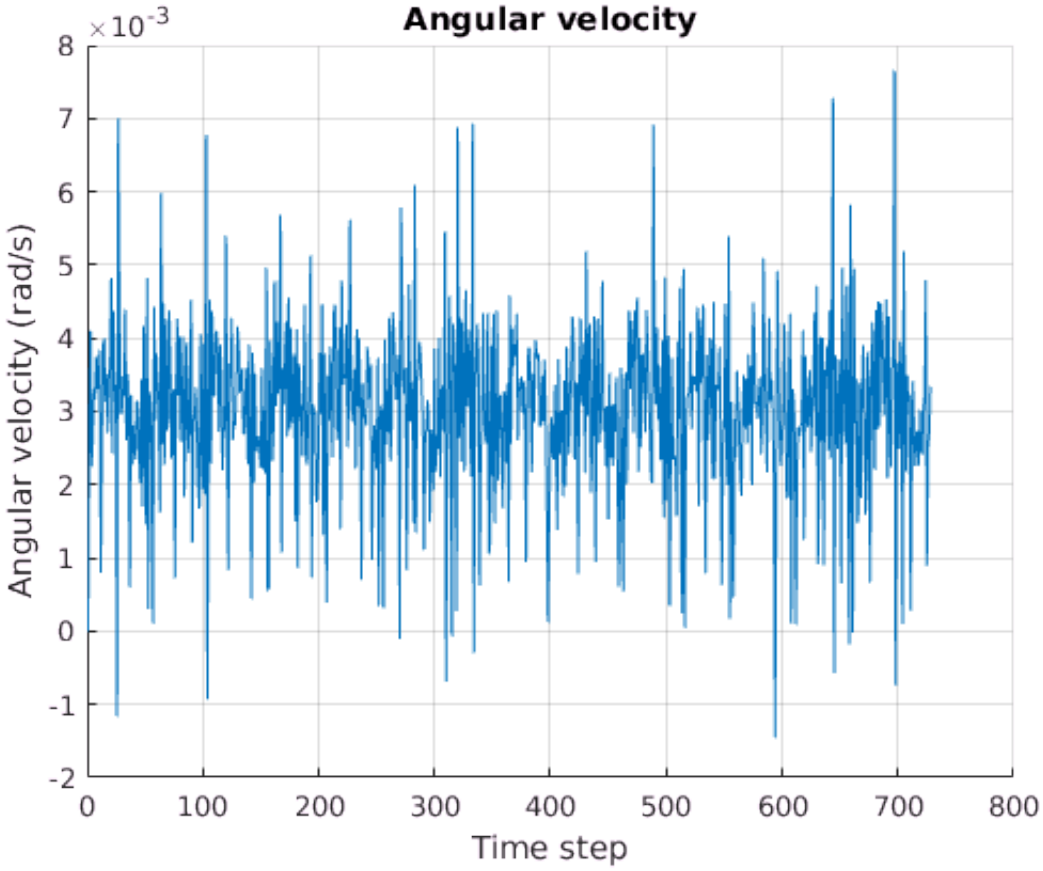


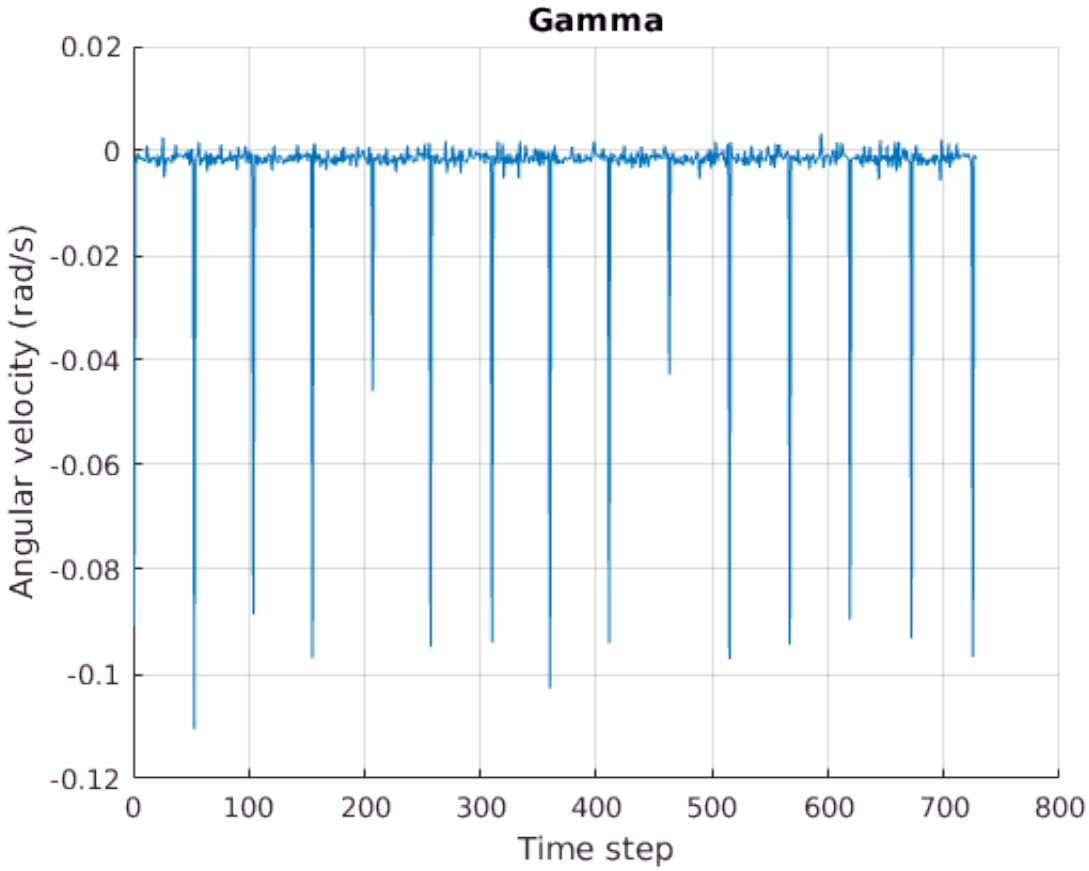

X vs Time
x in mm
Time step
300
250
200
150
100
50
0
-50
0
100
200
300
400
500
600
700
800


Y vs Time
y in mm
Time step
100
50
0
-50
-100
-150
-200
-250
0
100
200
300
400
500
600
700
800


Theta vs Time
Theta in radiants
-1
-2
-3
-4
-5
-6
-7
-8
-9
0
100
200
300
400
500
600
700
800
Time step


Linear velocity
Linear velocity (m/s)
0.4
0.3
0.2
0.1
0
-0.1
-0.2
-0.3
0
100
200
300
400
500
600
700
800
Time step






```
%A.ALPHA = SIGMA
Ar = abs([data1.v data1.omega 0 0 0 0;
```

```
    0 0 data1.v data1.omega 0 0;
    0 0 0 0 data1.v data1.omega;
    data2.v data2.omega 0 0 0 0;
    0 0 data2.v data2.omega 0 0;
    0 0 0 0 data2.v data2.omega]);
SIGMAr = [data1.sigma1; data1.sigma2; data1.sigma3; data2.sigma1; data2.sigma2; data2.sigma3];
ALPHAr = inv(Ar)*SIGMAr;

Al = abs([data3.v data3.omega 0 0 0 0;
    0 0 data3.v data3.omega 0 0;
    0 0 0 0 data3.v data3.omega;
    data4.v data4.omega 0 0 0 0;
    0 0 data4.v data4.omega 0 0;
    0 0 0 0 data4.v data4.omega]);
SIGMAl = [data3.sigma1; data3.sigma2; data3.sigma3; data4.sigma1; data4.sigma2; data4.sigma3];
ALPHAl = pinv(Al)*SIGMAr;

A = vertcat(Ar,Al);
SIGMA = vertcat(SIGMAr, SIGMAl);
ALPHA = pinv(A)*SIGMA;
display(ALPHA);
```

```
ALPHA = 6x1 double

    2.1242
 -158.9048
    0.0063
   -0.1271
    0.0854
   -2.8532
```