

## SERIAL MONITOR DATA

### First reached height above target Height

1. System Started.
2. System Initiated.
3. Controller Starting.

Time,	Power,	Angle,	Height,	Error
0.56,	80,	-68.50,	-0.46,	0.07
0.61,	50,	-68.50,	-0.46,	0.07
0.66,	50,	-68.50,	-0.46,	0.07
0.72,	50,	-68.50,	-0.46,	0.07
0.77,	50,	-68.50,	-0.46,	0.07
0.82,	50,	-68.50,	-0.46,	0.07
0.88,	50,	-68.50,	-0.46,	0.07
0.93,	50,	-68.50,	-0.46,	0.07
0.98,	50,	-68.50,	-0.46,	0.07
1.04,	50,	-68.50,	-0.46,	0.07
1.09,	50,	-68.50,	-0.46,	0.07
1.14,	50,	-68.50,	-0.46,	0.07
1.20,	50,	-68.50,	-0.46,	0.07
1.25,	50,	-68.50,	-0.46,	0.07
1.30,	50,	-68.50,	-0.46,	0.07
1.36,	50,	-68.50,	-0.46,	0.07
1.41,	50,	-68.50,	-0.46,	0.07
1.46,	50,	-68.50,	-0.46,	0.07
1.51,	50,	-68.50,	-0.46,	0.07
1.57,	50,	-68.50,	-0.46,	0.07
1.62,	50,	-68.50,	-0.46,	0.07
1.67,	50,	-68.50,	-0.46,	0.07
1.73,	50,	-68.50,	-0.46,	0.07
1.78,	50,	-68.50,	-0.46,	0.07
1.84,	50,	-68.50,	-0.46,	0.07
1.89,	50,	-68.50,	-0.46,	0.07
1.94,	50,	-68.50,	-0.46,	0.07
1.99,	50,	-68.50,	-0.46,	0.07

2.05,	50,	-68.50,	-0.46,	0.07
2.10,	50,	-68.50,	-0.46,	0.07
2.15,	50,	-68.50,	-0.46,	0.07
2.21,	50,	-68.50,	-0.46,	0.07
2.26,	80,	-67.12,	-0.45,	0.06
2.31,	50,	-67.12,	-0.45,	0.06
2.37,	80,	-63.31,	-0.44,	0.05
2.42,	50,	-63.31,	-0.44,	0.05
2.47,	80,	-59.16,	-0.42,	0.03
2.53,	50,	-59.16,	-0.42,	0.03
2.58,	50,	-53.97,	-0.40,	0.01
2.63,	50,	-53.97,	-0.40,	0.01
2.69,	50,	-50.16,	-0.38,	-0.01
2.74,	80,	-47.40,	-0.36,	-0.03
2.80,	50,	-47.40,	-0.36,	-0.03
2.85,	50,	-47.40,	-0.36,	-0.03
2.90,	50,	-47.40,	-0.36,	-0.03
2.96,	50,	-47.40,	-0.36,	-0.03
3.01,	50,	-47.40,	-0.36,	-0.03
3.07,	80,	-43.59,	-0.34,	-0.05
3.12,	50,	-43.59,	-0.34,	-0.05
3.18,	80,	-39.44,	-0.31,	-0.08
3.23,	80,	-37.02,	-0.30,	-0.09
3.28,	50,	-37.02,	-0.30,	-0.09
3.34,	50,	-37.02,	-0.30,	-0.09
3.39,	50,	-37.02,	-0.30,	-0.09
3.45,	50,	-37.02,	-0.30,	-0.09
3.50,	50,	-37.02,	-0.30,	-0.09
3.56,	50,	-37.02,	-0.30,	-0.09
3.61,	50,	-37.02,	-0.30,	-0.09
3.66,	50,	-37.02,	-0.30,	-0.09
3.72,	50,	-37.02,	-0.30,	-0.09
3.77,	50,	-37.02,	-0.30,	-0.09
3.83,	50,	-37.02,	-0.30,	-0.09
3.88,	50,	-37.02,	-0.30,	-0.09
3.94,	50,	-37.02,	-0.30,	-0.09

3.99,	80,	-31.83,	-0.26,	-0.13
4.04,	50,	-31.83,	-0.26,	-0.13
4.10,	50,	-31.83,	-0.26,	-0.13
4.15,	50,	-31.83,	-0.26,	-0.13
4.21,	50,	-31.83,	-0.26,	-0.13
4.26,	50,	-31.83,	-0.26,	-0.13
4.32,	50,	-31.83,	-0.26,	-0.13
4.37,	50,	-31.83,	-0.26,	-0.13
4.42,	50,	-31.83,	-0.26,	-0.13
4.48,	50,	-31.83,	-0.26,	-0.13
4.53,	50,	-31.83,	-0.26,	-0.13
4.59,	50,	-31.83,	-0.26,	-0.13
4.64,	50,	-31.83,	-0.26,	-0.13
4.70,	50,	-31.83,	-0.26,	-0.13
4.75,	50,	-31.83,	-0.26,	-0.13
4.80,	50,	-31.83,	-0.26,	-0.13
4.86,	50,	-31.83,	-0.26,	-0.13
4.91,	50,	-31.83,	-0.26,	-0.13
4.97,	50,	-31.83,	-0.26,	-0.13
5.02,	50,	-31.83,	-0.26,	-0.13
5.07,	50,	-31.83,	-0.26,	-0.13
5.13,	50,	-31.83,	-0.26,	-0.13
5.18,	50,	-31.83,	-0.26,	-0.13
5.24,	50,	-31.83,	-0.26,	-0.13
5.29,	50,	-31.83,	-0.26,	-0.13
5.35,	50,	-31.83,	-0.26,	-0.13
5.40,	50,	-31.83,	-0.26,	-0.13
5.46,	50,	-31.83,	-0.26,	-0.13
5.51,	50,	-31.83,	-0.26,	-0.13
5.56,	50,	-31.83,	-0.26,	-0.13
5.62,	50,	-31.83,	-0.26,	-0.13
5.67,	50,	-31.83,	-0.26,	-0.13
5.73,	50,	-31.83,	-0.26,	-0.13
5.78,	50,	-31.83,	-0.26,	-0.13
5.84,	50,	-31.83,	-0.26,	-0.13
5.89,	50,	-31.83,	-0.26,	-0.13

5.95,	50,	-31.83,	-0.26,	-0.13
6.00,	30,	-52.59,	-0.39,	0.00
6.05,	50,	-52.59,	-0.39,	0.00
6.11,	50,	-52.59,	-0.39,	0.00
6.16,	50,	-52.59,	-0.39,	0.00
6.21,	50,	-52.59,	-0.39,	0.00
6.26,	50,	-52.59,	-0.39,	0.00
6.32,	50,	-52.59,	-0.39,	0.00
6.37,	50,	-52.59,	-0.39,	0.00
6.43,	50,	-52.59,	-0.39,	0.00
6.48,	50,	-52.59,	-0.39,	0.00
6.53,	50,	-52.59,	-0.39,	0.00
6.59,	50,	-52.59,	-0.39,	0.00
6.64,	50,	-52.59,	-0.39,	0.00
6.69,	50,	-52.59,	-0.39,	0.00
6.75,	50,	-52.59,	-0.39,	0.00
6.80,	50,	-52.59,	-0.39,	0.00
6.85,	50,	-52.59,	-0.39,	0.00
6.90,	50,	-52.59,	-0.39,	0.00
6.96,	50,	-52.59,	-0.39,	0.00
7.01,	50,	-52.59,	-0.39,	0.00
7.06,	50,	-52.59,	-0.39,	0.00
7.12,	50,	-52.59,	-0.39,	0.00
7.17,	50,	-52.59,	-0.39,	0.00
7.22,	50,	-52.59,	-0.39,	0.00
7.28,	50,	-52.59,	-0.39,	0.00
7.33,	50,	-52.59,	-0.39,	0.00
7.38,	50,	-52.59,	-0.39,	0.00
7.44,	50,	-52.59,	-0.39,	0.00
7.49,	50,	-52.59,	-0.39,	0.00
7.54,	50,	-52.59,	-0.39,	0.00
7.60,	50,	-52.59,	-0.39,	0.00
7.65,	50,	-52.59,	-0.39,	0.00
7.70,	50,	-52.59,	-0.39,	0.00
7.76,	50,	-52.59,	-0.39,	0.00
7.81,	50,	-52.59,	-0.39,	0.00

7.86,	50,	-52.59,	-0.39,	0.00
7.92,	50,	-52.59,	-0.39,	0.00
7.97,	50,	-52.59,	-0.39,	0.00
8.02,	50,	-52.59,	-0.39,	0.00
8.08,	50,	-52.59,	-0.39,	0.00
8.13,	50,	-52.59,	-0.39,	0.00
8.18,	50,	-52.59,	-0.39,	0.00
8.24,	50,	-52.59,	-0.39,	0.00
8.29,	50,	-52.59,	-0.39,	0.00
8.34,	50,	-52.59,	-0.39,	0.00
8.40,	50,	-52.59,	-0.39,	0.00
8.45,	50,	-52.59,	-0.39,	0.00
8.50,	50,	-52.59,	-0.39,	0.00
8.56,	50,	-52.59,	-0.39,	0.00
8.61,	50,	-52.59,	-0.39,	0.00
8.66,	50,	-52.59,	-0.39,	0.00
8.72,	50,	-52.59,	-0.39,	0.00
8.77,	50,	-52.59,	-0.39,	0.00
8.82,	50,	-52.59,	-0.39,	0.00
8.88,	50,	-52.59,	-0.39,	0.00
8.93,	50,	-52.59,	-0.39,	0.00
8.98,	50,	-52.59,	-0.39,	0.00
9.03,	50,	-52.59,	-0.39,	0.00
9.09,	50,	-52.59,	-0.39,	0.00
9.14,	50,	-52.59,	-0.39,	0.00
9.19,	50,	-52.59,	-0.39,	0.00
9.25,	50,	-52.59,	-0.39,	0.00
9.30,	50,	-52.59,	-0.39,	0.00
9.35,	50,	-52.59,	-0.39,	0.00
9.41,	50,	-52.59,	-0.39,	0.00
9.46,	50,	-52.59,	-0.39,	0.00
9.51,	50,	-52.59,	-0.39,	0.00
9.57,	50,	-52.59,	-0.39,	0.00
9.62,	50,	-52.59,	-0.39,	0.00
9.67,	50,	-52.59,	-0.39,	0.00
9.73,	50,	-52.59,	-0.39,	0.00

9.78,	50,	-52.59,	-0.39,	0.00
9.83,	50,	-52.59,	-0.39,	0.00
9.89,	50,	-52.59,	-0.39,	0.00
9.94,	50,	-52.59,	-0.39,	0.00
9.99,	50,	-52.59,	-0.39,	0.00
10.05,	50,	-52.59,	-0.39,	0.00
10.10,	50,	-52.59,	-0.39,	0.00
10.15,	50,	-52.59,	-0.39,	0.00
10.21,	50,	-52.59,	-0.39,	0.00
10.26,	50,	-52.59,	-0.39,	0.00
10.32,	50,	-52.59,	-0.39,	0.00
10.37,	50,	-52.59,	-0.39,	0.00
10.43,	50,	-52.59,	-0.39,	0.00
10.48,	50,	-52.59,	-0.39,	0.00
10.53,	50,	-52.59,	-0.39,	0.00
10.59,	50,	-52.59,	-0.39,	0.00
10.64,	50,	-52.59,	-0.39,	0.00
10.70,	50,	-52.59,	-0.39,	0.00
10.75,	50,	-52.59,	-0.39,	0.00
10.81,	50,	-52.59,	-0.39,	0.00
10.86,	50,	-52.59,	-0.39,	0.00
10.91,	50,	-52.59,	-0.39,	0.00
10.97,	50,	-52.59,	-0.39,	0.00
11.02,	50,	-52.59,	-0.39,	0.00
11.08,	50,	-52.59,	-0.39,	0.00

4. Shuting down...

Time taken to reach Maximum height: 6.05s

Current Angle: -52.59°

First Height reached: -0.26m

Height reached After correction: -0.39m

Maximum error encountered: -0.13m

Error after correction: 0.00m

## First reached height below target height.

1. System Started.
2. System Initiated.
3. Controller Starting.

Time,	Power,	Angle,	Height,	Error
0.56,	80,	-68.50,	-0.46,	0.07
0.61,	50,	-68.50,	-0.46,	0.07
0.66,	50,	-68.50,	-0.46,	0.07
0.72,	50,	-68.50,	-0.46,	0.07
0.77,	50,	-68.50,	-0.46,	0.07
0.82,	50,	-68.50,	-0.46,	0.07
0.88,	50,	-68.50,	-0.46,	0.07
0.93,	50,	-68.50,	-0.46,	0.07
0.98,	50,	-68.50,	-0.46,	0.07
1.04,	50,	-68.50,	-0.46,	0.07
1.09,	50,	-68.50,	-0.46,	0.07
1.14,	50,	-68.50,	-0.46,	0.07
1.20,	50,	-68.50,	-0.46,	0.07
1.25,	50,	-68.50,	-0.46,	0.07
1.30,	50,	-68.50,	-0.46,	0.07
1.36,	50,	-68.50,	-0.46,	0.07
1.41,	50,	-68.50,	-0.46,	0.07
1.46,	50,	-68.50,	-0.46,	0.07
1.51,	50,	-68.50,	-0.46,	0.07
1.57,	50,	-68.50,	-0.46,	0.07
1.62,	50,	-68.50,	-0.46,	0.07
1.67,	50,	-68.50,	-0.46,	0.07
1.73,	50,	-68.50,	-0.46,	0.07
1.78,	50,	-68.50,	-0.46,	0.07
1.84,	50,	-68.50,	-0.46,	0.07
1.89,	50,	-68.50,	-0.46,	0.07
1.94,	50,	-68.50,	-0.46,	0.07
1.99,	50,	-68.50,	-0.46,	0.07
2.05,	50,	-68.50,	-0.46,	0.07
2.10,	50,	-68.50,	-0.46,	0.07

2.15,	50,	-68.50,	-0.46,	0.07
2.21,	50,	-68.50,	-0.46,	0.07
2.26,	50,	-68.50,	-0.46,	0.07
2.31,	50,	-68.50,	-0.46,	0.07
2.37,	50,	-68.50,	-0.46,	0.07
2.42,	50,	-68.50,	-0.46,	0.07
2.47,	50,	-68.50,	-0.46,	0.07
2.53,	50,	-68.50,	-0.46,	0.07
2.58,	50,	-68.50,	-0.46,	0.07
2.63,	50,	-68.50,	-0.46,	0.07
2.69,	50,	-68.50,	-0.46,	0.07
2.74,	50,	-68.50,	-0.46,	0.07
2.79,	50,	-68.50,	-0.46,	0.07
2.85,	50,	-68.50,	-0.46,	0.07
2.90,	50,	-68.50,	-0.46,	0.07
2.95,	50,	-68.50,	-0.46,	0.07
3.01,	50,	-68.50,	-0.46,	0.07
3.06,	50,	-68.50,	-0.46,	0.07
3.11,	50,	-68.50,	-0.46,	0.07
3.17,	50,	-68.50,	-0.46,	0.07
3.22,	50,	-68.50,	-0.46,	0.07
3.27,	50,	-68.50,	-0.46,	0.07
3.33,	50,	-68.50,	-0.46,	0.07
3.38,	50,	-68.50,	-0.46,	0.07
3.43,	50,	-68.50,	-0.46,	0.07
3.49,	50,	-68.50,	-0.46,	0.07
3.54,	50,	-68.50,	-0.46,	0.07
3.59,	50,	-68.50,	-0.46,	0.07
3.65,	50,	-68.50,	-0.46,	0.07
3.70,	50,	-68.50,	-0.46,	0.07
3.75,	50,	-68.50,	-0.46,	0.07
3.81,	50,	-68.50,	-0.46,	0.07
3.86,	80,	-67.12,	-0.45,	0.06
3.91,	50,	-67.12,	-0.45,	0.06
3.96,	50,	-67.12,	-0.45,	0.06
4.02,	50,	-67.12,	-0.45,	0.06



4.07,	50,	-67.12,	-0.45,	0.06
4.12,	50,	-67.12,	-0.45,	0.06
4.18,	50,	-67.12,	-0.45,	0.06
4.23,	80,	-64.35,	-0.44,	0.05
4.28,	50,	-64.35,	-0.44,	0.05
4.34,	50,	-64.35,	-0.44,	0.05
4.39,	50,	-64.35,	-0.44,	0.05
4.44,	50,	-64.35,	-0.44,	0.05
4.50,	50,	-64.35,	-0.44,	0.05
4.55,	50,	-64.35,	-0.44,	0.05
4.60,	50,	-64.35,	-0.44,	0.05
4.66,	50,	-64.35,	-0.44,	0.05
4.71,	50,	-64.35,	-0.44,	0.05
4.76,	50,	-64.35,	-0.44,	0.05
4.82,	50,	-64.35,	-0.44,	0.05
4.87,	50,	-64.35,	-0.44,	0.05
4.92,	50,	-64.35,	-0.44,	0.05
4.98,	50,	-64.35,	-0.44,	0.05
5.03,	50,	-64.35,	-0.44,	0.05
5.08,	50,	-64.35,	-0.44,	0.05
5.14,	50,	-64.35,	-0.44,	0.05
5.19,	50,	-64.35,	-0.44,	0.05
5.24,	50,	-64.35,	-0.44,	0.05
5.30,	50,	-64.35,	-0.44,	0.05
5.35,	50,	-64.35,	-0.44,	0.05
5.40,	50,	-64.35,	-0.44,	0.05
5.46,	50,	-64.35,	-0.44,	0.05
5.51,	50,	-64.35,	-0.44,	0.05
5.56,	50,	-64.35,	-0.44,	0.05
5.61,	50,	-64.35,	-0.44,	0.05
5.67,	50,	-64.35,	-0.44,	0.05
5.72,	50,	-64.35,	-0.44,	0.05
5.78,	50,	-64.35,	-0.44,	0.05
5.83,	50,	-64.35,	-0.44,	0.05
5.88,	50,	-64.35,	-0.44,	0.05
5.94,	50,	-64.35,	-0.44,	0.05

5.99,	50,	-64.35,	-0.44,	0.05
6.04,	50,	-64.35,	-0.44,	0.05
6.09,	50,	-64.35,	-0.44,	0.05
6.15,	50,	-64.35,	-0.44,	0.05
6.20,	50,	-64.35,	-0.44,	0.05
6.26,	80,	-52.59,	-0.39,	0.00
6.31,	50,	-52.59,	-0.39,	0.00
6.36,	50,	-52.59,	-0.39,	0.00
6.42,	50,	-52.59,	-0.39,	0.00
6.47,	50,	-52.59,	-0.39,	0.00
6.52,	50,	-52.59,	-0.39,	0.00
6.57,	50,	-52.59,	-0.39,	0.00
6.63,	50,	-52.59,	-0.39,	0.00
6.68,	50,	-52.59,	-0.39,	0.00
6.73,	50,	-52.59,	-0.39,	0.00
6.79,	50,	-52.59,	-0.39,	0.00
6.84,	50,	-52.59,	-0.39,	0.00
6.89,	50,	-52.59,	-0.39,	0.00
6.95,	50,	-52.59,	-0.39,	0.00
7.00,	50,	-52.59,	-0.39,	0.00
7.05,	50,	-52.59,	-0.39,	0.00
7.11,	50,	-52.59,	-0.39,	0.00
7.16,	50,	-52.59,	-0.39,	0.00
7.21,	50,	-52.59,	-0.39,	0.00
7.27,	50,	-52.59,	-0.39,	0.00
7.32,	50,	-52.59,	-0.39,	0.00
7.37,	50,	-52.59,	-0.39,	0.00
7.43,	50,	-52.59,	-0.39,	0.00
7.48,	50,	-52.59,	-0.39,	0.00
7.53,	50,	-52.59,	-0.39,	0.00
7.59,	50,	-52.59,	-0.39,	0.00
7.64,	50,	-52.59,	-0.39,	0.00
7.69,	50,	-52.59,	-0.39,	0.00
7.75,	50,	-52.59,	-0.39,	0.00
7.80,	50,	-52.59,	-0.39,	0.00
7.85,	50,	-52.59,	-0.39,	0.00

7.91,	50,	-52.59,	-0.39,	0.00
7.96,	50,	-52.59,	-0.39,	0.00
8.01,	50,	-52.59,	-0.39,	0.00
8.07,	50,	-52.59,	-0.39,	0.00
8.12,	50,	-52.59,	-0.39,	0.00
8.17,	50,	-52.59,	-0.39,	0.00
8.23,	50,	-52.59,	-0.39,	0.00
8.28,	50,	-52.59,	-0.39,	0.00
8.33,	50,	-52.59,	-0.39,	0.00
8.39,	50,	-52.59,	-0.39,	0.00
8.44,	50,	-52.59,	-0.39,	0.00
8.49,	50,	-52.59,	-0.39,	0.00
8.55,	50,	-52.59,	-0.39,	0.00
8.60,	50,	-52.59,	-0.39,	0.00
8.65,	50,	-52.59,	-0.39,	0.00
8.71,	50,	-52.59,	-0.39,	0.00
8.76,	50,	-52.59,	-0.39,	0.00
8.81,	50,	-52.59,	-0.39,	0.00
8.86,	50,	-52.59,	-0.39,	0.00
8.92,	50,	-52.59,	-0.39,	0.00
8.97,	50,	-52.59,	-0.39,	0.00
9.02,	50,	-52.59,	-0.39,	0.00
9.08,	50,	-52.59,	-0.39,	0.00
9.13,	50,	-52.59,	-0.39,	0.00
9.18,	50,	-52.59,	-0.39,	0.00
9.24,	50,	-52.59,	-0.39,	0.00
9.29,	50,	-52.59,	-0.39,	0.00
9.34,	50,	-52.59,	-0.39,	0.00
9.40,	50,	-52.59,	-0.39,	0.00
9.45,	50,	-52.59,	-0.39,	0.00
9.50,	50,	-52.59,	-0.39,	0.00
9.56,	50,	-52.59,	-0.39,	0.00
9.61,	50,	-52.59,	-0.39,	0.00
9.66,	50,	-52.59,	-0.39,	0.00
9.72,	50,	-52.59,	-0.39,	0.00
9.77,	50,	-52.59,	-0.39,	0.00

9.82,	50,	-52.59,	-0.39,	0.00
9.88,	50,	-52.59,	-0.39,	0.00
9.93,	50,	-52.59,	-0.39,	0.00
9.98,	50,	-52.59,	-0.39,	0.00
10.04,	50,	-52.59,	-0.39,	0.00
10.09,	50,	-52.59,	-0.39,	0.00
10.14,	50,	-52.59,	-0.39,	0.00
10.20,	50,	-52.59,	-0.39,	0.00
10.25,	50,	-52.59,	-0.39,	0.00
10.31,	50,	-52.59,	-0.39,	0.00
10.36,	50,	-52.59,	-0.39,	0.00
10.42,	50,	-52.59,	-0.39,	0.00
10.47,	50,	-52.59,	-0.39,	0.00
10.52,	50,	-52.59,	-0.39,	0.00
10.58,	50,	-52.59,	-0.39,	0.00
10.63,	50,	-52.59,	-0.39,	0.00
10.69,	50,	-52.59,	-0.39,	0.00
10.74,	50,	-52.59,	-0.39,	0.00
10.80,	50,	-52.59,	-0.39,	0.00
10.85,	50,	-52.59,	-0.39,	0.00
10.90,	50,	-52.59,	-0.39,	0.00
10.96,	50,	-52.59,	-0.39,	0.00
11.01,	50,	-52.59,	-0.39,	0.00
11.07,	50,	-52.59,	-0.39,	0.00
11.12,	50,	-52.59,	-0.39,	0.00
11.18,	50,	-52.59,	-0.39,	0.00
11.23,	50,	-52.59,	-0.39,	0.00
11.28,	50,	-52.59,	-0.39,	0.00
11.34,	50,	-52.59,	-0.39,	0.00

4. Shuting down...

Time taken to reach Maximum height: 6.31s

Current Angle: -52.59°

First Height reached: -0.44m

Height reached After correction: -0.39m

Maximum error encountered: 0.05m

Error after correction: 0.00m

