Meeting

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Progress report

Table 1: Original step Performance of the Controller

	β	ϕ	θ
Rise time(sec)	0.2346	0.1563	0.1842
2% Settling time(sec)	7.8495	7.8894	8.2162
5% Settling time(sec)	4.3881	4.2785	4.4597
Overshoot(%)	17.2318	23.8851	18.8808
Undershoot(%)	6.7786	5.7071	6.0666
Steady-state error	0.0006	0.0007	0.0015

Progress report

- Set the initial condition to 0.
- The reference set to $[10°, 30°]$ sample in uniform distribution.

Table 2: Fixed step Performance of the Controller

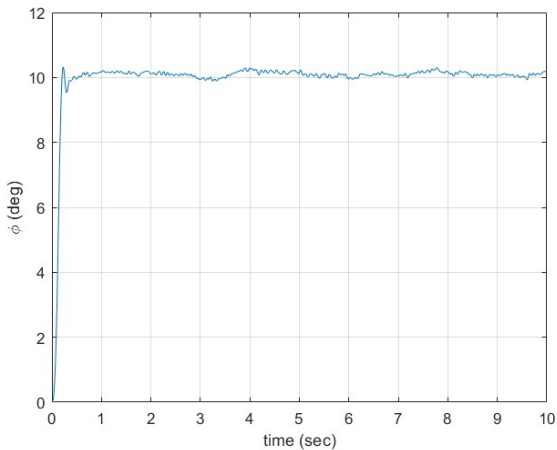|	β	ϕ	θ
Rise time(sec)	0.2845	0.2238	0.3635
2% Settling time(sec)	2.4784	1.2343	6.7757
5% Settling time(sec)	1.1697	0.4597	1.4901
Overshoot(%)	12.6288	2.0139	7.7633
Undershoot(%)	0	0	0
Steady-state error(%)	0.17	0.32	2.30

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Figure 1: Step response of ϕ