**May 6, 2016 - Kessler**

UTC = local time + 6hrs

Flights conducted 15-20 yards away from the Washington Mesonet Tower

Front

Back

Windsonde 248

Windsonde 247

Windsonde 246

All windsondes located under the rotors and shielded by small PVC pipes (not in contact). See pictures below.

Flight 1

Start Battery: 12.5 V

Start Direction: 353° N

Windsondes: 246 & 248

Ascent Start: 17:42.07 UTC

Reached 10 m: 17:42.30

Reached 20 m: 17:43.06

Reached 30 m: 17:43.42

Reached 40 m: 17:42.22

Reached 50 m: 17:44.59

Reached 60 m: 17:45.35

Reached 70 m: 17:46.13

Reached 80 m: 17:46.55

Reached 90 m: 17:47.32

Reached 100 m: 17:48.10

Reached 110 m: 17:48.48

Reached 120 m: 17:49.25

Max Height: 120 m

Coming Down: 17:49.47

Reached 10 m: 17:52.44

Coming Down: 17:56.23

Landed: 17:56.47 UTC

End Battery: 10.7 V

Remarks: First, we went up briefly to make sure the controls are working. The flight plan was to go up to a maximum height of 120 meters while stopping every 10 meters for 20 seconds. Also on the way down, we stopped and hovered at 10 meters until the copter battery was low. Because of tablet low battery, we flew the plan manually. Something that we noticed is that it had random oscillations in height while hovering at 10 meters.

Flight 2

Start Battery: 12.55 V

Windsondes: 247 & 248

Ascent Start: 18:12.16 UTC

Reached 50 m: 18:15.07

Reached 100 m: 18:18.10

Reached 120 m: 18:19.26

Max Height: 120 m

Coming down: 18:19.46

Reached 10 m: 18:22.39

Coming down: 18:28.17

Landed: 18:28.42 UTC

End Battery: 10.7 V

Remarks: First, we went up briefly to make sure the controls are working. The flight plan was to go up to a maximum height of 120 meters while stopping every 10 meters for 20 seconds. Also on the way down, we stopped and hovered at 10 meters until the copter battery was low. Because of tablet low battery, we flew the plan manually.

Flight 3

Start Battery: 12.57 V

Windsondes: 246 & 247

Ascent Start: 18:41.51 UTC

Reached 120 m: 18:48.22

Coming down: 18:48.47

Max Height: 120 m

Reached 10 m: 18:51.23

Coming down: 18:57.26

Landed: 18:57.55 UTC

End Battery: 10.7 V

Remarks: First, we went up briefly to make sure the controls are working. The flight plan was to go up to a maximum height of 120 meters while stopping every 10 meters for 20 seconds. Also on the way down, we stopped and hovered at 10 meters until the copter battery was low. We flew automatically.

Flight 4

Start Battery: 12.4 V

Windsondes: 246 & 248

Ascent Start: 19:17.00 UTC

Max Height: 10 m

Rotated: 19:25.15

Coming down: 19:32.30

Landed: 19:33.12 UTC

End Battery: 10.6 V

Remarks: The plan was to hover at 10 meters facing 0 degrees N for 8 minutes. Then it rotated 90 degrees to the right (East) until the battery got low. We flew automatically and started flying even though 246 was not connected to a satellite.

Flight 5

Start Battery: 12.5 V

Windsondes: 247 & 248

Ascent Start: 19:41.55 UTC

Max Height: 10 m

Rotated: 19:50.10

Coming Down: 19:58.23

Landed: 19:58.53 UTC

End Battery: 10.6 V

Remarks: The plan was to hover at 10 meters facing South for 8 minutes. Then it rotated 90 degrees to the right (West) until the battery got low. We flew automatically.

Flight 6

Start Battery: 12.53 V

Windsondes: 246 & 247

Ascent Start: 20:03.27 UTC

Max Height: 20 m

Landed: 20:07.45 UTC

End Battery: 11.8 V

Remarks: The flight plan was to go up to a maximum height of 120 meters while stopping every 10 meters for 20 seconds. However, the copter stopped ascending at 20 meters. It then started coming down. We flew automatically. We didn’t let the rotars spin enough before the copter took off causing a possible lack of aspiration.









