**March 31, 2016 - Kessler**

UTC = local time + 6hrs

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

Front

Back

Windsonde 246

Windsonde 247

Windsonde 249

Windsonde 248

All windsondes located away from the rotors on the ends of the booms and shielded by a small PVC pipe (not in contact). See pictures below.

Flight 1

Start Battery: 12.28 V

Start Direction: 2° N

Windsondes: 247 & 249

Ascent Start: 13:15.10 UTC

13:15:50 Turning to face W

13:16:00 Turning to face N

13:16.24 Turning to face W

13:16.34 Turning to face N

13:16.53 Turning to face W

13:17.07 Turning to face N

13:17.26 Turning to face W

13:17.41 Turning to face N

13:18.02 Turning to face E

13:18.16 Turning to face N

13:18.38 Turning to face E

13:18.50 Turning to face N

13:19.12 Turning to face W

13:19.28 Turning to face N

13:19.46 Turning to face E

13:19.59 Turning to face N

13:20.19 Turning to face W

Max Height: 100 m

13:21.38 Going back up

13:22.26 Turning to face N

13:22.26 Coming down

13:23.22 Austin took control

13:24.24 Coming down

Landed: 13:25.58 UTC

End Battery: 11.16 V

Remarks: The copter was programmed (with Mission Planner) to ascend 10 m and stop for 20 seconds before ascending another 10 m all the way up to 100 m. It was not programmed to rotate but the copter rotated while ascending and then rotated back to the North at its waypoint.

Flight 2

Start Battery: 11.31 V

Start Direction: 330° N

Windsondes: 246 & 248

Ascent Start: 13:35.26 UTC

13:25.48 Reached 9 m

13:39.15 Battery low - landing

13:39.33 Landed

Landed: 13:39.33 UTC

End Battery: 10.90 V

Remarks: The copter was programmed (with Mission Planner) to hover around 10 m for 8 minutes and around 2 m for 8 minutes. The direction the copter was facing stayed relatively constant along with its height. However, the battery was not fully charged and did not fly very long (Dan error).

Flight 3

Start Battery: 12.54 V

Start Direction: 3° N

Windsondes: 246 & 248

Ascent Start: 13:47.20 UTC

13:52.00 almost crash landed

Landed: 15:15.26 UTC

Battery: 11.6 V

Ascent Start: 13:56.43

13:57.00 Turning to face SW (because of wind)

13:59.34 Rapidly descended (because of wind)

13:59.22 Rapidly descended (because of wind)

14:00.06 Rapidly descended (because of wind)

14:01.47 Rapidly descended (because of wind)

14:03.38 Coming down

14:04.20 Going back up

14:05.15 Battery low – landing

Landed: 14:04.47 UTC

Remarks: The copter was programmed (with Mission Planner) to hover at 1.5 m for 5 minutes then land. Then it did the same thing as the first flight with ascending 10 m, stopping for 20 seconds, then ascend again until reaching 100 m. When it hovered around 1.5 m, it had trouble staying level because of the wind. The copter gets deflected away from the wind and corrects to face the wind. The wind kept intensifying causing us to land it before 5 minutes. When it was supposed to ascend to 100 m, it did not fly above 40 m.

For next time: Start bringing extra props.













