

## ***Interactive comment on “University of Nebraska UAS profiling during LAPSE-RATE” by Ashraful Islam et al.***

### **Anonymous Referee #1**

Received and published: 11 January 2021

General Comments: This data paper highlights contributions from researchers at the University of Nebraska-Lincoln to the 2018 LAPSE-RATE Campaign. The paper is well organized and provides sufficient explanation of the hardware used in data collection. The sensor deployment used to collect the data is relatively unique among LAPSE-RATE participants.

Specific Comments: Line 17 - Define what fixed-site profiling means here. I believe the intent is that multirotors can fly to and remain at a fixed point for a period of time. Line 20 - Define CLOUD-MAP before first use. Line 50 - Why weren't the barometric pressure sensors integrated in the iMet-XQ2 and nimbus-ptb sensors included in the technical description? Line 82 - Elaborate on what periodic checks of the data means. I assume you mean a human is observing that data are being collected and the values

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appear to be reasonable. Were there instances where you observed abnormal data collection mid-flight using the wireless data stream and modified or aborted a flight, or switched out instrumentation after a flight? Line 83 & 84 - Was the interface between the DJI M600P flight controller and the Odroid a turn-key solution or did you have to develop any custom software to decode the DJI telemetry stream? Were GPS data from the iMet-XQ2/1 discarded? Line 111 - Define MURC before first use.

Technical Corrections: Line 83 - add "The" in front of "UAS's". Lines 102 & 103 - Spell out approximate instead of approx. Replace ~ with the same term for consistency. Use "g" instead of "gm" for abbreviated units of grams.

Check the journal spacing requirements when using units. Spacing is inconsistent throughout the manuscript and tables.

Some minor editing for consistent uses of past tense is needed.

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Interactive comment on Earth Syst. Sci. Data Discuss., <https://doi.org/10.5194/essd-2020-374>, 2020.

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