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Interactive comment on "Crowdsourced Air Traffic Data from the OpenSky Network 2019–20" *by* Martin Strohmeier et al.

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Overall this is a very useful dataset, and the manuscript describes it well. I have no major recommendations for changes but there are a few minor issues and also some questions that I have:

Abstract line 2: Change 'airplanes' to 'aircraft', as Opensky also sees helicopters etc.

Line 5: Delete 'further' from 'surged further'.

Line 9: I note that the text says the dataset ends on Jul 1st 2020. Will this be extended? I know the paper describes the data up to that date, but if the actual dataset will be continued beyond this then it'd be worthwhile to note in the text.

Line 17: Change 'article' to 'particulate'.

Line 31: I think a typo: 'xte'.

Figure 1: You might need to explain what the 'stopped anonymous feeding' note on this figure is, as readers unfamiliar with opensky might get confused here.

Lines 74+75: You say "many well-covered regions" and "many countries" in the same sentence. One of these can be deleted.

Lines 83+84: The description of the method to prevent counting multiple flights is unclear. This sentences needs rewording. From what I can gather, the speed and distance are extrapolated, and if a new position report is received then its location is sanity-checked against this extrapolated speed/distance/time. But please reword, and also include a bit more detail (how close does the extrapolated time have to be, for example?)

Line 91 + 92: Could callsign be used to verify this? I presume it'd mean having to call in external data, but could be a useful check of how accurate the estimated departure/arrival airport is. Some kind of accuracy assessment would be very good here, as it is currently missing.

Line 105: What happens if multiple copies of the same message are received but at different times? Which timestamp is used?

Line 107: Change 'a second' to 'one second'.

Line 152 + 153: Do the first seen and last seen times include on ground reports? I'm thinking about aircraft that sit on the ground with the transponder on, or get stuck in queues for the runway.

Line 156 + 157: Likewise with altitude, is the altitude reported the first one above the groud, or the on-ground altitude? I have noticed from the actual ADS-B data in opensky that on ground altitudes are often incorrect (10000+ft is not uncommon) so how is this

handled?

Line 155: Could an 'average altitude' for the flight be added to the data? This would be really useful for a large number of environmental researchers, for example. Figures 4 + 5: I find these plots quite hard to read (they're much nicer in the 'traffic' html than in a PDF document!) Could you please re-work these figures to make them more suitable for the print / pdf copy? Maybe remove the circles and just keep the lines?

Line 181: Change "Almost all" to "Most".

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Interactive comment on Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2020-223, 2020.