

EMADDC: high volume, high quality, and timely wind and temperature observations from aircraft surveillance data (Mode-S EHS)

We thank Bruce for reviewing!

Detailed comments

line 27. “Dedicated aircraft” - “Some commercial aircraft” would be better *done*

40 “preferred above” - “preferred to” *done*

40 “Since corrections” - “Corrections” (or combine the two sentences: “parameters, since corrections”) *done*

191 “Using the found datum for an aircraft” - “Using this value for the aircraft” (also change datum to value line 189) *done*

200 “are not regular flying” - “are not flying regularly” *done*

201 “high correction datum values” - “large corrections” *done*

202 “datum corrections values” - “correction values” *done*

206 “The corrections for these aircraft are invalidated and hence not used.” - I suspect you mean that the winds from these aircraft are not used. It could be read that they are used with zero correction. *done* Some words have been added

223 “many of observations” - “many observations” *done*

237 “few tenth meter per second” - “few tenths of a meter per second” *done*

320-321 “outliers are identified using linear regression over individual aircraft’s 30-second time windows”

A colleague pointed out that looking at a time-series of hours for an individual aircraft there are some suspect points (outliers). Some checking over a time period longer than 30-seconds should be considered. *we will consider this when working on the next version of heading and temperature correction*

354 “historic NWP” - “past NWP” *done*

355 “operational available” - “current” (matches past better) *done*

360 “These values are all within the acceptable range for use in for example data assimilation.” It is worth mentioning the WMO Rolling Review of Requirements, see <https://space.oscar.wmo.int/observingrequirements> (I haven’t done any comparison of the two) *done* we added some words

370 “as anchor observation” - “as anchor observations” *done*

370 “are generally launched at the main synoptic hours 00 UTC ...” they are usually launched 40 or 45 minutes earlier. Perhaps “provide profiles centred on the main synoptic hours 00 UTC ...” *done* we added some words

376 “has mostly” - “mostly has” *done*

379 “Reason” - “The reason” *done*

381 “radiosonde soundings” *done*

Figure 9. I suggest removing the legend from the first and last panels as they partially obscure the lines. Add vertical zero line to the first panel. Caption “middle pane” - “middle panel” (or use ‘pane’ for all three) *done*

458 “National Meteorological Hydrological Institutes” - “National Hydrometeorological Institutes” (usual term) *done*

Ruijgrok, G. J. J.: Elements of Airplane Performance, Delftse University Pers, 1990. “Delft University Press” There is a second edition 2009 <https://repository.tudelft.nl/record/uuid:9ff3c7e0-e221-4d8f-bf9e-e144d3cacdc1> *not done* thanks for the link, next time we will use this reference