Review of the revised manuscript 'Near real-time atmospheric and oceanic science products of Himawari-8/9 geostationary satellites over the South China Sea'

Peter Kuma

Department of Meteorology (MISU), Stockholm University, Stockholm SE-106 91, Sweden

19 July 2024

Dear editor and authors,

I would like to thank the authors for addressing my comments. I am mostly satisfied with the revision. I only have a few remaining minor and technical comments left. After addressing these small issues, I recommend the manuscript for publication.

Kind regards,

Dr. Peter Kuma

Comments

According to Hersbach et al. (2020), ERA5 assimilates at least infrared radiances and wind (through AMV) from Himawari. I think this should be at least briefly mentioned in the text.

When asking for the use of consistent units for temperature (K or °C), I only meant in Table 1 and in the data files. In the manuscript text, I think it still makes sense to use °C (or K) freely, as commonly used for the given quantity. I apologise for the misunderstanding. In Table 1 it is probably better to keep °C in the Units column for LI_Index, Showalter_Index and TT_Index, rather than changing it to K and adding a note 'Stored in Celsius'. The main reason why I commented on this issue in the previous round is because it can be confusing when some quantities are stored in data files in multiple alternative units, such as K and °C. It would make sense if this were changed in the data files, rather than just the manuscript. In any case, this is a minor technical issue, and I mention this merely as a suggestion.

L561–562: The citations should be in one set of parentheses.

L575: The Data availability section is ordinarily placed after the main text and is unnumbered.

Table 1: **1=Spare**: In my previous comment, I meant that the authors should at least briefly explain to the readers what this category means.

L585: **download**: downloaded.

L586: **FTP://www.hellosea.org.cn:10021**: This should be 'ftp://www.hellosea.org.cn:10021'. The scheme name is typically lowercase in URLs (RFC 3986).

Figure 6f: The cloud effective radius now shows a much greater discrepancy relative to MODIS. This is something that should be at least briefly mentioned or discussed in the text.

References

Hersbach H, Bell B, Berrisford P, et al. The ERA5 global reanalysis. *Q J R Meteorol Soc.* 2020; 146: 1999–2049. https://doi.org/10.1002/qj.3803